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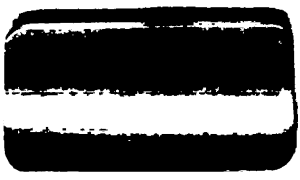

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GROUP OF COTTAGES FOR WOMEN, CRAIG COLONY, SONYEA, N. Y.

REPRINT FROM "CARE AND TREATMENT OF EPILEPTICS," BY WILLIAM PRYOR LETCHWORTH, LL. D.

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TRANSACTIONS

OF THE

NATIONAL ASSOCIATION

FOR THE

STUDY OF EPILEPSY

AND THE

CARE AND TREATMENT OF EPILEPTICS

AT THE
FIRST ANNUAL MEETING HELD IN WASHINGTON, D. C.,
MAY 14TH AND 15TH, 1901

EDITED BY
WILLIAM PRYOR LETCHWORTH, LL. D.

UNIVERSITY OF CALIFORNIA

C. E. Brinkworth, Buffalo, New York.
1901

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PREFACE.

THE first annual meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics was held in the Medical Department of the Columbian University in Washington, D. C., on the 14th and 15th of May, 1901. The numerous papers and reports prepared for the occasion so limited the time for discussion as to make it apparent that in future more time should be allotted to the annual meetings.

The objects of the meeting were greatly promoted by the aid kindly rendered the Association by Secretary Hay, through whom the benevolent and voluntary co-operation of many of our Foreign Ministers was secured; and by their assistance contributions of great value were obtained. Several of the foreign papers, specially prepared by request, did not arrive in time to be read at the meeting, but it has been thought proper to include them in the printed transactions.

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EPILEPTICS

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I.

THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS.

FIRST ANNUAL MEETING, MAY 14TH AND 15TH, 1901.

INTRODUCTORY ADDRESS BY THE PRESIDENT.

Members of the Association, Ladies and Gentlemen:

The Executive Committee of the Association has very kindly invited me to deliver an opening address on this interesting occasion. The numerous papers prepared for this meeting, treating the subject under our consideration both from an historical and a medical standpoint, render an exhaustive presentation of any phase of the subject by me quite unnecessary. I will therefore consume but a few moments of the limited time at our disposal, and what I say may more properly be considered an introductory statement than a comprehensive address, customary on such occasions.

Pursuant to a formal call from numerous persons residing in different parts of the United States who were specially interested in the welfare of epileptics, a meeting was held at the Academy of Medicine in New York City on the 24th of May, 1898, at which the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics was organized.

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In order to secure the co-operation of as many scientific and benevolent forces as practicable, it was decided at the outset that any person interested in the scientific study of epilepsy, or in the study of ways and means to improve the condition of epileptics, or in sociological subjects generally, should be eligible to membership.

Since its organization, the officers, members, and Executive Committee of the Association have earnestly endeavored to awaken a greater public interest in epileptics and to stimulate practical efforts to ameliorate their condition. This has been done by the publication of original articles upon the subject in medical and other journals, and by direct appeals to State Boards of Charities, State Medical Societies, members of legislative bodies and influential citizens, to co-operate in one way or another in efforts to provide suitable care and treatment for this afflicted class.

In the beginning of our work there was found to be a lack of general information regarding epileptics. It was known that in some of our States and in foreign countries, provision of one kind or another had been made for them and that various systems existed for their care and treatment; but there was no single source from which necessary information could be obtained. I set out to supply this need, and gathered, as far as I was able, from both official and private sources, and by personal visitation, all obtainable data respecting existing institutional systems for the care and treatment of this unfortunate class. The result of my efforts is embodied in the work on epileptics* which I dedicated to this Association on the 2d of September, 1899. It is in no sense a medical treatise upon the disease of epilepsy, but a record of personal observations and a presentation of historical facts respecting existing foundations for epileptics, with sugges-

*Care and Treatment of Epileptics; G. P. Putnam's Sons.

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tions regarding their care. The papers and reports presented to this meeting will bring the history of the subject down to the present time, and the medical side of the question will be dealt with by distinguished specialists.

Through the kind courtesy of Secretary Hay, valuable service has been rendered the Association. By his assistance and the benevolent co-operation of our Foreign Ministers and Ambassadors we have information relating to this strange disease from different countries of Europe, including Sweden in the north and Italy in the south. We have valuable papers and communications from Mexico, South America, India, and Japan, also hints of progressive work in Australia. From other reliable sources we have a review of the work for epileptics in Great Britain, including an interesting account of the development of the useful and beneficent work of the National Society for Employment of Epileptics at Chalfont, St. Peter, England. We have late information concerning the progress of the great work at the Bethel Colony near Bielefeld, and much that is suggestive from Belgium and Switzerland. We wait expectantly, hoping for more light from the wide expanse of Russia, including the wine-growing region of Caucasus. From all these various sources we have matter for study and reflection. The history of the special work for epileptics will be brought down to the present date in Ohio, New York, Massachusetts, Pennsylvania, New Jersey, Texas, and elsewhere in the United States, including the efforts of philanthropists in Illinois, from which gratifying results were at one time expected through the action of the present Legislature.

It is generally admitted that institutional life is best adapted in most instances to the peculiar needs of the epileptic. The first effort for his relief should therefore be to make special institutional provision, where his life may be systematically

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regulated, where he may find opportunity to turn to useful account the faculties which the disease has not already impaired and which are capable of further development, where his sympathies may be enlarged by companionship with others similarly afflicted, and where he may find encouragement in the thought that all that science and philanthropy can do to cure him or ameliorate his condition is studiously applied for his benefit.

It should be the aim of this Association to awaken in the public mind a broader sympathy for those suffering from epilepsy, and so extend the necessary provision and protection for them, to encourage scientific study of this interesting subject, to diffuse a wider knowledge of what constitutes intelligent and healthful care, and at the same time endeavor to reform those social customs which perpetuate the disease.

Moreover, while using our influence to enlarge provision for epileptics, we should emphasize the importance of strict adherence to economical principles if we expect to extend State provision as rapidly as is expedient. Especially should these principles be observed in the construction of buildings, which, so far as practicable, should conform to the homes of the average citizen in comfortable circumstances. Buildings on the congregate plan and palatial structures with luxurious appointments cannot be too strongly disapproved.

There is much that this occasion suggests, but I will forbear to say more. It is gratifying to reflect, that, in the short period of its existence, so much has been accomplished by the Association. The work has been done unpretentiously, with care and discretion, awakening no rivalries, and without embarrassing any good work already undertaken for epileptics.

A permanent organization having been established, I recommend that the Association hereafter hold annual meetings,

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and that each gathering be made an occasion for reviewing that which has been accomplished during the year preceding, and for the enunciation of new principles and theories.

I also recommend that, in organizing the annual meetings, the rule be adopted which is observed by the National Conference of Charities and Correction—that a new president be chosen each year, so that fresh life and energy may be infused into the work, the nature of which is such that, to insure the highest success, the co-operation of medical men with charity workers, legislators, public officials, and benevolent citizens interested in the welfare of epileptics, is necessary. It is my hope that the requisites to membership will not be too closely restricted, but that the work may be conducted on the broad lines already pursued. I cannot but think that a great future lies before the Association and that few of us have any just conception of the possibilities of this great humanitarian movement.

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OHIO HOSPITAL FOR EPILEPTICS.

Ohio having been the first State in the Union to establish a State hospital for epileptics, the President announced that it was the desire of the Association to hear from that State before proceeding further, and called upon General Roeliff Brinkerhoff, member of the Board of State Charities, who spoke as follows:

ADDRESS OF GENERAL ROELIFF BRINKERHOFF.

Mr. President, Ladies and Gentlemen:

The Superintendent of our epileptic hospital in Ohio expected to be here, but he was unable to come; therefore, I will say a few words about that institution.

Ohio was the first State in America to establish a hospital for epileptics supported by the State. The history of that undertaking you will find in Mr. Letchworth's magnificent volume, "Care and Treatment of Epileptics."

As early as 1868, the State Board of Charities in its report presented to the authorities the importance of a separate institution, but no heed was given to it. There was a feeling that if we congregated epileptics together it would injure them—that they would affect one another. In 1869, the State Board again presented the subject, and in 1870 and 1871, but without any results. In 1871 the Board was abolished. It told too many unpleasant truths about institutions in the State. Four years later the Board was reorganized, and has been in constant existence ever since.

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One of the first things the Board did in 1876 was to advocate an epileptic colony, and again in 1877 and 1878. I was appointed on the Board in 1878, and very soon became infected with the enthusiasm of the Board for a hospital for epileptics. Dr. Byers, one of the noblest of philanthropists, was the Secretary of the Board at that time, and he said that he would visit the institutions of the State with me. We also went East and talked with specialists who were interested in epilepsy. We went, among other places, to Quebec and came back full of enthusiasm for an epileptic colony. We presented our views to the Legislature and gave the reasons why an epileptic colony was desirable, but we produced no effect on the Legislature at that time. We persevered, however. I sent abroad for books and read all that I could find on the subject. Dr. Peterson had made a report on Bielefeld, which I secured. I also obtained a report on La Force, and when the Legislature met I was full of the subject.

The Legislature of 1878 had passed a resolution instructing the State Board of Charities to take a census of epileptics. We found in the infirmaries 417, in the State asylums for the insane 165, in jails 64—or 646 in all. They were an injury to the hospitals and a horror to themselves. A conference of superintendents of State hospitals presented the matter to the Legislature, and a resolution was passed asking the Legislature to establish a colony. We then made a report and presented an estimate of the probable cost of establishing a colony. We said that for $300 per capita we could provide care for epileptics. That sort of thing went on till 1890. Finally, perseverance won the day. In April, 1890, a bill was passed authorizing the selection of a site and the erection of buildings for an epileptic asylum. A board of trustees was appointed, and after due consideration, they selected a site in the south end of the State. I have always believed it was

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a bad choice. The Board of State Charities never approved of it. Before the Legislature adjourned, it made an appropriation of $40,000 for the erection of buildings for the institution. In November, 1891, the corner-stone was laid with appropriate ceremonies, and I was selected to make the address. I gathered into that address all the facts that I could find with regard to the management of an epileptic institution. In 1893, there was room for 250 patients and they were brought in. Dr. Rutter, fortunately for the institution and for the State, was selected as the superintendent, and he has been there to the present time. The institution has grown in importance and in size, and now accommodates one thousand patients.

I have now reached the point where I think we should hear from Mr. I. F. Mack, who for some years has been a trustee at Gallipolis.

Responding to a request of the President, Mr. Mack addressed the meeting as follows:

ADDRESS OF MR. I. F. MACK.

Ladies and Gentlemen:

As a member of the Board of Trustees, it was my duty to look after the finances and to prevent the needless expenditure of money, rather than to pay attention to the internal management and treatment of the patients. I could not help being interested in the work. As a layman, I have devoted some attention to the treatment of these unfortunate persons, and I want to protest against the notion that the expense of maintaining a State institution is to be alone considered. The cost of an institution is a matter of minor importance to an intelligent tax-payer. We have some fifteen State institutions in Ohio, and every one of them saves money

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to the tax-payers; they are money-savers. We have taken these unfortunate people out of the county infirmaries and jails and slums, and we care for them at less cost to the people than it cost before.

As to treatment, I can say but little. The more I study the disease, the more I become interested in these unfortunate beings and the less I feel that we are going to accomplish anything more than to make life as easy as possible. I believe that the ultimate result of epilepsy is insanity. We have now over two hundred hopelessly insane. They are colonized by themselves in a building set apart for that purpose, out of sight and out of hearing of the rest of the colony. I always feel that they are nearly all bound to go there if they live long enough. That we have mitigated the horrors of the disease, made life easier and accomplished many cures, we know; our reports show that. That we can cure the disease when it is inherited I do not believe. That we have cured those who have epilepsy by accident, or women who had it after childbirth, is true; but I believe that cure is limited to those who have not inherited the disease.

We have devoted a great deal of time and money to the investigation of the disease, for the purpose of discovering its cause, and the cure if there is any. Investigation shows that no two cases are alike. When a patient dies, a section of the spinal column is removed, and in almost every case we find that the marrow is diseased. Our highest priced officer is the pathologist, the only one who receives $3,000 a year and support for himself, his wife, and his children. Dr. Rutter, the manager, gets $1,200. A statute prohibits the manager of an insane hospital getting more than $1,200 and board for himself and family. But we have hired this expert at what amounts to $5,000 a year, to ascertain, if possible, the cause of epilepsy. I have spent much time in his laboratory. I

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do not think it is money thrown away. I believe that Ohio can afford this expense and that it is good policy to make the outlay, provided the manager has confidence in the pathologist.

You may be surprised to know that in Ohio there are 3,500 epileptics outside of our institutions. There are said to be 6,000 in Illinois. How many, then, must there be in the whole country?—hopeless, helpless, unfortunate creatures. We have them from two years of age up to extreme old age. Some of our people would not send their relatives to such an institution because it is public, yet experience shows that it is the best place. If I had a son or a brother who was dear to me and he had this terrible disease, I should send him to the public hospital to be under trained nurses and doctors. The patients have better and more intelligent care than they could have in their homes. The patients themselves are kind to one another. They rush up to care for one of their number who has fallen and look after him till the attack has passed away. I sent a printer's boy of sixteen there. He had two or three attacks a day at home. He was discharged at the end of eighteen months cured, and he has not had an attack since he left the hospital. It was not an inherited case. I believe it was the system of diet that helped him most. Diet has more to do with the cure than all the bromides. They place six or eight patients at a table. The meals are served in courses. If a patient eats too rapidly, the attendant makes him leave the table. When they go to their homes, each family receives printed instructions about their diet and is instructed to use caution against overeating. In this way we are educating the people as to the care of patients in their charge.

What I have said is without preparation and not in any way from the physician's standpoint.

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EPILEPSY.

BY FREDERICK PETERSON, M. D.,

PRESIDENT OF THE BOARD OF MANAGERS OF CRAIG COLONY FOR EPILEPTICS, CONSULTING PHYSICIAN TO THE MANHATTAN STATE HOSPITAL, CLINICAL LECTURER ON INSANITY AT COLUMBIA UNIVERSITY.

There is, perhaps, no disease so well known to the world as epilepsy. No better description of it as ordinarily regarded can be found than in the works of Hippocrates written 2,400 years ago. The usual conception of an epileptic fit is well embodied in some verses of Lucretius.* He is the only poet, as far as I am aware, who has made an attack of epilepsy the subject of a poem. Writing nearly twenty centuries ago, he describes a seizure thus:

Oft, too, some wretch, before our startled sight,
Struck as with lightning, by some keen disease,
Drops sudden:—By the dread attack o'erpowered
He foams, he groans, he trembles, and he faints;
Now rigid, now convulsed, his labouring lungs
Heave quick, and quivers each exhausted limb.
Spread through the frame, so deep the dire disease
Perturbs his spirit; as the briny main
Foams through each wave beneath the tempest's ire.
He groans since every member smarts with pain,
And from his inmost breast, with wontless toil,
Confused and harsh, articulation springs.
He raves since soul and spirit are alike

*Lucretius (De Rerum Natura, III, 1.486–504) Translated by Mason Good.

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Disturbed throughout, and severed each from each
As urged above distracted by the bane.
But when, at length, the morbid cause declines,
And the fermenting humours from the heart
Flow back—with staggering foot the man first treads,
Led gradual on to intellect and strength.

This description of the disease is one that accords with our usual conception of an epileptic attack. The patient falls, cries out sharply, loses consciousness and has a spasm, after which he gradually regains consciousness and resumes his ordinary occupation. Nowadays we call such seizures *grand mal*, or severe attacks. They may come on frequently each day, or once in two or three days, or several times a month, or months apart, or in some instances, years apart. But since ancient times we have learned that epilepsy does not always manifest itself in this severe form. There are cases in which there is no fall, no cry, no spasm of the muscles, but simply a momentary fixation of the eyes, a momentary loss of consciousness—a kind of attack we have named *petit mal*.

Between the attacks characterized by loss of consciousness for an instant, without fall or spasm, and the attacks characterized by a cry, a fall, and convulsions lasting for many minutes, every conceivable gradation has been observed. There are degrees of loss of consciousness, so that the patient may be conscious of spasmodic conditions in his muscles, or may be in a subconscious state, during which his acts are automatic, like those of a somnambulist; and the duration of this semiconscious state may be a matter of seconds, minutes, hours, or even days. There are degrees, too, of the condition of muscular spasm, from the somnambulistic employment of the muscles for subconscious purposes to the slightest rigidity in a group of muscles, and from these again to the profoundest state of rhythmic contractions of all the muscles of the body.

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The lighter the attacks, the more frequent they are apt to be. I have known of these instantaneous attacks occurring as frequently as 2,000 times a day. We have therefore come to look upon the clinical picture of the disease as infinitely variable. No two cases are alike. Some convulsions are so severe that dislocations of the joints or fractures of the bones occur in the attacks, or blood-vessels rupture in the superficial or deeper-lying tissues. Others are so light that no effect whatever is noticed by the patient himself or the observer. Indeed, it is not infrequently a fact that patients have the mild type of epilepsy for years without any one having a knowledge of its existence.

There is still another type of the disorder, to which I have not referred, and that is one in which the symptoms are altogether mental. There is in this no loss of consciousness, not even a subconscious state; no cry, no fall, no spasm however light of the muscles, but simply a sudden and, ordinarily, a transitory change in the mental condition of the patient. This is known as pure psychic epilepsy. It is often the case that mental changes also precede or follow ordinary epileptic attacks. These mental changes are incident to the seizures, but there are psychic outbursts which take the place of the attacks; and it is to these I now allude. We thus see the difficulty of offering an exact definition of epilepsy. The best definition would be that epilepsy is a disease of the nervous system characterized either by frequently recurring convulsive attacks with loss of consciousness, or by partial manifestations of these symptoms, or by psychopathic substitutes, concomitants, or results.

As regards the clinical picture of the disease, these are the main features that have been added since the time of Hippocrates. I feel that there is still a wide field for observation and study here, particularly in relation to the psychological

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aspects of the disorder; and I believe that experts in morbid psychology would reap a rich harvest in investigating the phenomena of deranged consciousness and psychic changes in epilepsy. With the exception of these mental features of the disease, our clinical picture of epilepsy has become about perfect, so that but little practical advantage is to be gained by further study of symptoms.

It is in the domain of causes that we must now do our best work. We have already arrived at certain valuable conclusions. We know that heredity plays a large part in the etiology of epilepsy. There is, perhaps, no disease in which the workings of heredity are more striking. Epilepsy is one of the equivalents in polymorphic heredity. By this we imply that when the nervous mechanism governing the normal evolution of both body and mind is disarranged, the result is a condition of nervous instability which manifests itself in the descendants in some one of many forms. The result may be epilepsy, chorea, neurasthenia, hysteria, somnambulism, migraine, feeble-mindedness, idiocy, insanity, inebriety, criminal tendencies, or simple eccentricity. These are called hereditary equivalents, and any of them may appear in a neurotic family from generation to generation. They are all interchangeable manifestations of an unstable nervous system. Hence, in an inquiry into the history of a case of epilepsy, it is not enough to seek for other examples of epilepsy in the family, but we must look for all the above-mentioned phases of a morbid heredity. Statistics do not yet give us the definite conclusions that further investigation by means of more careful methods may one day furnish, but we may assume heredity as a cause of epilepsy in at least thirty-three per cent. of the cases.

Another and very important cause is the abuse of alcohol. Not only may alcohol itself give rise to what is known as al-

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coholic epilepsy in an inebriate, but it is more potent still as a factor in the causation of epilepsy through alcoholic hereditary degeneration. Thus alcoholism in parents is prone to induce epilepsy and other evidences of nervous instability in the children. In our studies of the direct effects of alcohol on the drinker we must not forget that neurotic degenerates present little resistance against the effects of alcohol. In many cases that we call alcoholic epilepsy the tendency to epilepsy or other neuroses existed previously by heredity, in which cases the alcohol is simply an exciting agent or a contributing cause.

Injury to the head occurring at birth, in childhood, or in later life, is, I am convinced, a not infrequent cause of epilepsy. Among other causes may be mentioned infectious diseases acting on the parents or on the patients themselves, frights or other emotional shocks either to the pregnant mother or the child, and a variety of obscure toxic conditions. Another reputed factor is what is known as a reflex cause; that is, convulsions brought about by irritation of peripheral nerves, such as disorders affecting the visceral nerves in the pelvis, the nerves of the gastro-intestinal tract, the nerves of the nose and of the ear, the nerves associated with the eye, etc. This so-called reflex type is undoubtedly the rarest form of epilepsy known. Among several thousand cases observed by me, I have never yet met with a case of epilepsy due to a reflex factor, although I have made it a point invariably to seek for such a cause. But I regret to say that there are certain physicians who, through ignorance or dishonesty, profit greatly in their practice by pelvic operations, by operations upon the ear or nose, and by cutting the eye-muscles in cases of epilepsy, inveigling these sufferers into the hope of cure through such means. Yet no case of genuine epilepsy was ever cured by their method.

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The seat of the disease is in the gray matter on the surface of the brain—the cortex. We have been able to limit its position in the organism to this extent. We understand these recurrent seizures to be a kind of explosion in the great nerve-cells of the gray matter. It is not an organic disease, but what we call a functional disorder—a neurosis. Neither the naked eye nor the microscope has ever been able to discover any changes in the brain-cells or in the nerve fibers that can be considered constantly and distinctively associated with epilepsy.

Though statistics are yet imperfect and therefore vary, it is probable that the sexes are about equally liable to the disease. The proportion of epileptics to population has been variously estimated as from one to two in a thousand. We are unable to say certainly whether there are 70,000 or 140,000 epileptics in the United States.

The course of epilepsy depends upon the frequency and severity of the attacks. In about ten per cent. of the cases, the frequency and severity are so great that the patients become ultimately insane. This is a natural result of a disease of the highest nerve centers of the brain. All authorities agree that between five and ten per cent. are curable, so that the disease is not so hopeless as many physicians have hitherto believed. Unfortunately, this skepticism as to cure on the part of medical men has led to superficial investigations and desultory care in these cases, and the results of such negligence have rather tended to demonstrate the truth of the assumption of incurability. I believe, as the result of my own experience and observation, that there is almost no case so bad that all hope of cure must be abandoned, and I believe that my confreres at the Craig Colony and at other institutions especially adapted to the care of epileptics, will corroborate this view.

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As regards the treatment of epilepsy, it is necessary to look at this aspect of the subject from two standpoints; viz., that of prophylaxis and that of amelioration of the condition of the victims. If we were but able in the human family to control the reproduction of individuals with hereditary instability of the nervous system, it would be a long step in advance for preventive medicine. We display an extraordinary solicitude with regard to the proper development of our horses and cattle, but seldom even ordinary precaution in the rearing of human progeny. But some day the laws of heredity will be so fully appreciated that the parties to the marriage contract, the officiating clergymen, the physicians, and the lawyers will all combine to aid in uplifting the human race, instead of complacently permitting its degradation.

This must be a matter of general education of the people in the facts of morbid heredity. As it is now, the marriage of epileptics, the feeble-minded, and partially insane persons is of frequent occurrence, not to mention the greater frequency of marital union of the hysterical neurasthenic, and otherwise diseased individuals. I have personally met with married epileptics, and several years ago I observed an instance of the marriage of an epileptic man and an epileptic girl, both of whom were intelligent and fully aware of the name of their malady. It is doubtful if the laws to prevent such unions, recently enacted in two or three of our western States, will be effective; but at any rate the agitation of the subject by the press and the existence of such laws must be helpful in educating the public to the moral wrong and dangers of indiscriminate marriages. Preventive medicine as applied to epilepsy must also take sides with the temperance societies against the common enemy, alcohol. Until the effects of neurotic heredity are fully understood, and the evils of alcoholism and ill-advised marriages duly appreciated, we shall

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always have with us the children born with the blight of ancestral sins and woes.

The amelioration of the condition of the epileptic is one of the main purposes of this Association, and its establishment is due to an awakening all over the world to the miserable state of these unfortunates, hitherto neglected in almshouses and asylums. A large number of them are incapacitated for the usual vocations of normal men but for a few minutes or hours at long or short intervals; yet the nature of the malady is such that epileptics must be denied the usual privileges of schools, entertainments, society, and employment, and hence are allowed to grow up into adult life, ignorant, idle, isolated and neglected, with a resulting tendency to greater and greater moral and mental degeneration. It has been demonstrated that a colony scheme of care and treatment is best adapted to their needs; for their requirements are—opportunities for education, for outdoor life, for a regular hygienic mode of living, for a circumscribed diet, for medicinal treatment by specialists, and for home life in which they will not feel that sense of neglect and isolation which is their fate in the world of normal men. The colony or village scheme meets all of these wants, and it is the object of this Association to bring before all of the States of the Union the crying need for special institutions of this order for their epileptic dependents.

Another means of amelioration of the condition of epileptics, which we may each and all of us help to further, lies in securing the endowment of scientific laboratories, where the best pathologists, psychologists and chemists may join together in studying the causes and methods of treatment of the disease. Every special institution for epileptics should generously maintain a pathological institute, and no money could be more advantageously appropriated or given, whether by State or private philanthropy, than money devoted to this end.

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ONE POINT OF VIEW.

BY SARAH DALL MUNRO, BUFFALO, N. Y.

A celebrated Frenchman, traveling in America, having expressed his own opinion freely, would always conclude by saying: "but each one has his own point of view." Equally true it is, that only by combining all points of view can we get a perfect acquaintance with any whole.

These considerations help to give me courage in asking your attention to what I am about to say, based as it is, upon the experience of one observer only. The point of view is that of an intelligent mother who has watched through many years a beloved son steadily succumbing to the gradual increase of epileptic conditions. Beginning in early youth, with very mild attacks, he was at first cared for within the family, but later spent part of each year away from home. Finally his permanent absence proved best for all concerned.

Thus it happened that the boy became, for periods varying from two to six months, an inmate of "Retreats" or private families, numbering eight in all, at different points within the boundaries of three eastern States. In one he remained for three consecutive summers, the establishment then being permanently closed.

With this exception, he was returned from all as an undesirable, unmanageable or even dangerous patient. This resulted in his being placed, experimentally, in a large family,

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one member of which was a woman who had, for several years, shared with his mother the care of him at his home.

This arrangement has now continued for more than six years. Reports of his happiness, good conduct, and perfect tractability have been uniform during this period and supplemented by the testimony of eye-witnesses, members of his family and others, who have visited him at intervals. His nurse has even repeatedly desired that her wages might be reduced, saying that as he gives so little trouble she considers herself much overpaid.

These conditions, so satisfactory and in such marked contrast to those reported by nearly all others who had had charge of the case, naturally led to careful investigation into the causes of a difference so great.

Other opportunities for studying conditions came to this mother in the following ways:

It was her custom, when searching for a home for her boy, to inspect each place proposed, and by personal observation, during a stay which was sometimes extended over several days, to try to satisfy herself of the advantages offered and also to become acquainted with the physicians and others who would have charge of the case. When he entered any home, she always went with him and remained a week or longer, partly to ease his natural loneliness and partly to further observe his surroundings. In this way she became more or less familiar, not only with many of the most attractive and promising of the places in the eastern States which offer to care for such sufferers, but with many of the patients themselves.

As a result of all this observation, she is convinced that certain things are essential to the happiness and consequent tractability of epileptic patients.

First among these and most important, is a genuine and

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earnest desire on the part of all about them to *make them happy*.

Too often the feeling appears to be, that if the patient be housed, clothed and fed, with more or less regard to the degree of comfort to which he is accustomed (medical care of course not being omitted), all that the most exacting could possibly require, has been done. The fact that, in the hampered and restricted existence which is all that these unfortunates can ever hope for on this earth, the desire for better things still persists; that life, liberty and the pursuit and attainment of happiness are just as dear to them as to their normal fellow-beings—all this seems often completely overlooked.

Second only to this, is ability on the part of the patients to put absolute confidence in the good faith of those who have charge of them. The practice of giving promises not meant to be kept, of evading direct answers and other forms of petty deceit, may be said to be almost universal among attendants, nor is it always confined to that class of caretakers. "He will never remember it again," is a usual remark; "It is the easiest way," the usual thought.

It is her firm belief that a very large proportion of the trouble in managing the majority of cases arises from such practices as these. The patient may appear to submit, make no complaint, but he is seldom deceived. The dull, apparently stupefied, brain perceives nothing more quickly than the fact of being cheated, though the "how" and the "why" may remain dim. Who it was who thus offended is remembered when most other things are quite forgotten, and the patient's consciousness of being helpless in the matter only increases the sense of injury, brooded over until it finds vent in some outburst of rage, quite inexplicable to those to whose duplicity it is due, because they look only for some near-by and immediate cause.

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Between this mother and this son has always existed a peculiar sympathy of spirit, as if the physical tie, severed at birth, had persisted in a mental or spiritual form. Illustrations could be given did space permit. By help of this intimacy of spirit, as well as in other ways, she fully believes that in spite of the results of illness, within the hampering limits of defective brain and body, the individual personality persists uninjured, all appearances to the contrary being due to the impossibility of communicating with others through the imperfect means remaining to the body in which it is imprisoned.

If true in this case, may it not be true of many or all others?

Through this hindering veil of flesh, long after other impressions cease to pass, the spirit of love can and does penetrate, as is clearly shown, notably in Bethel Colony near Bielefeld, as well as elsewhere. The patient, met with frank, but kind and really regretful refusal of a cherished wish, will bear with patience the denial whose necessity is to him incomprehensible, given in love by one whom he trusts. The same request, seemingly granted by a promise afterwards ignored, remains a permanent root of bitterness and future trouble, the latter probably never traced to its real source.

Next in importance come outdoor life and congenial occupation, the value and necessity of which are now so universally understood, that it seems superfluous to dwell on these points in this brief paper. But it may not be amiss to urge again the desirability of going a step further still in the latter direction and recall the fact that work, not only for work's sake, but with a higher motive, namely, to minister to the wants and relieve the needs of others, has proved most stimulating and useful in developing unselfishness.

The care of young creatures—chickens, kittens, puppies or farm animals—and the companionship of pets, help in the

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same direction, teaching at the same time, gentle deeds, and suggesting tender thoughts.

It is, of course, not to be expected that attendants with these qualities of perfect truthfulness and capable of perfect kindness to, or even affection for, persons so often far from attractive, can readily be found in number sufficient to supply the demand. Necessity for special training becomes apparent at once. Yet, although training is essential and most valuable, it is, after all, of little use without a natural endowment of cheerfulness, tact, patience, sympathy and the power to appeal to the higher nature of the patient,—in short, the parental or maternal instinct.

These essential qualities are rarely developed in the young. Youth is apt to be impatient and unsympathetic, disliking anything ailing or maimed, as foreign to itself; but there are many single women approaching middle life in whom the maternal instinct is developed even more fully than in some mothers. For these reasons it would seem to be wise in choosing women to be trained for this purpose, to give the preference to those no longer in their first youth, but who have natural qualifications for the work.

Some writers have dwelt upon the fact that women seem to be peculiarly adapted to the care and education of these unfortunates. Dr. William P. Letchworth cites their work at Bielefeld, Sonyea and elsewhere, in confirmation of this, but chiefly in connection with women and girls. It is the firm conviction of this mother that the maternal influence could and should be extended to the other sex as well. She is not ignorant of the existence of cases which, at first sight, seem to be unsuited to and unsuitable for woman's care, but believes that they are far fewer than is usually supposed, and would here enter her earnest plea that the experiment may at least be tried wherever it seems in the least possible. In

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the case of her own son, it has proved not only possible, but *the only possible* means of happiness and comfort, all experiments with attendants of his own sex having ended disastrously.

Briefly, then, she would urge, as the result of more than twenty years of experience and study, that (medical care being presupposed) these three things are essential to success in caring for an epileptic patient.

First of all, he must be made happy. To this end he must be surrounded with persons who will treat him with absolute frankness, kindness and affection, on whose unselfish thought for him he can learn to depend with entire confidence under all circumstances.

Second, he must be kept occupied in some way that he finds interesting, preferably out-of-doors.

Third, every effort must be made to develop the higher nature, to teach him to find interesting such things as make for gentleness and unselfishness, both passive and active; that is, both personal and altruistic.

It may be argued that in this present world such ends are too ideal to be attained, such conceptions too unpractical to be possible of realization.

Yet, such ends are being attained and such conceptions are now being realized, as for many years past, in that most successful of all colonies, Bethel, near Bielefeld, Germany.

From this settlement and the precepts of those who manage it, we learn that entire success may be expected only by those who, consciously or unconsciously, follow in the steps of Christ, offering their lives in a spirit of consecration to the service of suffering humanity. We know that such are found on the other side of the Atlantic, and surely none will maintain that they are not to be found also here in America.

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AN IDEAL COLONY FOR EPILEPTICS AND THE NECESSITY FOR THE BROADER TREATMENT OF EPILEPSY.

BY WILLIAM P. SPRATLING, M. D.,

MEDICAL SUPERINTENDENT OF THE CRAIG COLONY FOR EPILEPTICS, SONYEA, N. Y.; SECRETARY OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS; MEMBER BUFFALO ACADEMY OF MEDICINE, AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, ROCHESTER PATHOLOGICAL ASSOCIATION, ETC.

We group the essential features of an ideal colony for epileptics as follows:

1. Location, including { Climate, Water, Soil, Drainage, Accessibility.
2. Landscape Improvements.
3. Construction—General and Special.
4. Organization { (a) Administrative, (b) Medical, (c) Scientific,

and will deal with each in order.

The problem of properly locating a colony for epileptics is of the utmost importance, for its location will govern to a large degree the measure of success to which the undertaking may aspire. The choice of sites is necessarily confined to a given area, usually the boundary line of a State. It would thus seem impossible to apply, even approximately, rules as

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regards climate, water, soil, drainage, and accessibility. But such is not the case; for, taking New York State as an illustration, we find between the northern and southern sections of the State marked differences in all the material conditions that would aid largely in making or marring a colony; and like differences are apparent, to some extent, in most of the States east, west, and south; but perhaps not to such a degree in the States of the great middle West.

Whether thermometric conditions have any influence on the number and severity of seizures in a large epileptic community, it is not possible at this time to say; but in a study by seasons of some 40,000 seizures at the Craig Colony, the results were practically neutral. This takes no account, however, of individual cases that generally do better or worse, have more seizures or less, in summer or in winter; however, such cases are few, and should not in any way influence the matter of locating a colony for hundreds. In selecting a site, the climatic conditions should be carefully considered; for if such an institution is located where the colonists can lead as active and independent outdoor lives as possible, then we may reasonably hope for favorable results which, under less auspicious conditions, would be unattainable. That epileptics should lead an active outdoor life, is now a recognized factor in their treatment in Europe, England and America; a factor first recognized at Bielefeld, in Germany, forty years ago, and, so far as we know, first practiced in America at the Craig Colony, instituted in 1896.

As to whether heat or cold, a moist or dry air, a high altitude or sea level have in anywise good or evil effects in the vast majority of cases of the disease itself, there is not to my knowledge, any data or evidence that would aid us in forming even a reasonably just conclusion. On the other hand, it can be clearly shown that the best climate for an epileptic is that

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in which the conditions are such as to make outdoor life possible to the fullest extent, just as it has been proved beyond question that certain pulmonary diseases do best in certain localities; the sole difference being that in the former the climate itself possesses no especial value beyond that of being a condition that makes other things possible, while in the case of lung diseases, meteorologic conditions themselves possess very distinctive therapeutic value.

Water in abundance—good ,pure, wholesome—is one of the first requisites in any segregation of living beings, and it can be obtained by some means almost anywhere, the chief problem being that of cost. Water that contains organic matter, that is too hard, or that is taken from a source bearing the pollution of populated districts, is always objectionable. An ideal water for all purposes should be clear, colorless, odorless. It should contain not more than one to three parts of solids in 10,000, and the supply should be sufficient to permit of a daily consumption per capita of not less than sixty to seventy gallons throughout the year. A model system of securing the water supply is to collect spring water into a reservoir located at a sufficient altitude to secure by gravity the desired pressure at the point of use. This obviates the necessity for pumping and insures an adequate pressure to meet all demands at any time.

So very essential, indeed, is an abundant supply of good water that a colony should not be located until it has been demonstrated beyond doubt that the site contemplated will fill all requirements, both immediate and remote; and in ascertaining this point, it would be well to enlist the services of a competent engineer. As an absolutely essential commodity, water can be good or bad, give health or breed disease, be easy or difficult to procure, or cost much or little. So before locating a colony, let me reiterate—be sure that it will be

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possible to get good water in abundance; that it is drawn from a source that will yield all the future may require, and that it will be procurable at the minimum cost.

In this connection, let me call attention to the fact that the excessive cost of maintaining future great essential commodities may possibly have something to do with expenditures along other lines. If the cost of maintenance is high through keeping up expensive water and sewerage systems, through constant repairs to improper construction, or through unwise planning of the colony at the beginning; if all these things are so unfortunately arranged or constructed as to demand a constant call on the treasury, then other worthy objects, such as the education of the colonists, the scientific study of epilepsy, and the constant employment of the best methods of medical care and treatment and of research work may suffer in consequence.

So many evils spring from imperfect drainage, natural and artificial, that it seems superfluous to recount them here; but I cannot forego the statement that an ideal colony should not be located on land where natural drainage is bad for the poor reason that it would be cheaper to buy such land. Procure the best lands at the start, avoid localities that overflow or that contain unhealthy marshes, stagnant lagoons, or any dead water. Good drainage about houses is especially desirable and proper soil conditions make this possible. The perfection of sanitary science will meet any requirements of interior drainage if the required outlay can be made; and here again it is essential to have only the best.

Next to the necessity for procuring cleanliness, the effectual disposing of the refuse collected through cleaning is a requirement, else re-contamination will be inevitable.

The accessibility of an ideal colony should, in proportionate degree, meet three requirements:

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1. Too easy access of the outside world to the colony and too easy access on the part of the colonists to the outside world are both distinctly objectionable. We must recognize in the type of epileptic that comes under State care an individual abnormal in some way; at any moment, and for almost any length of time, irresponsible—a fit and worthy child of the State, requiring constantly the beneficent seclusion from society so generously provided.

2. Reasonable proximity to the centers of population is desirable, as most of the colonists will come from such centers; but do not unite the colony with such centers, so as to make it easy for the epileptic to change his place of residence from colony to civil life, or for the evil influences that contaminate densely populated districts to come easily into colony life. Temptation cannot be avoided, but in a people worthy of and under State care, its gratification may be made difficult, or perhaps impossible.

3. In studying accessibility, the transportation of supplies must not be neglected, for the cost of this service is from three to four per cent. of the total cost of the supplies—fair interest returns on large invested sums.

Concisely, then, the good features under "accessibility" should be: seclusion of the colonists within a reasonable distance of populated districts, and provisions for the best transportation at the minimum cost. But remember, seclusion is the main thing; for we cannot place a money value on the good to society, to the epileptic, and to a growing posterity of the effective removal from society of people of this class.

Landscape architecture in connection with charitable institutions is yet an undeveloped art, for the reason that a knowledge of the degree to which the ornamental features of such work should be combined with such as are practical, remains largely unstudied and undetermined. But I know of no

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field so promising under future cultivation as that of satisfactorily meeting the requirements of such institutions in this work; and when it comes to planning a colony for epileptics it is always desirable to secure the earnest co-operation of the best landscape architect obtainable; for the problems to be met will be many, and the architect should be so broad in his views, his mind so open to conviction, his powers of comprehension so complete as to enable him to grasp the situation in such a way that he may blend all that is ornamental and beautiful with that which is of practical necessity, always bearing in mind the fact, that charitable institutions are places where much money is spent and but little earned, and where all expenditures should be guardedly and judiciously made.

I am too ignorant of the principles underlying the beautiful work that landscape architects do, to speak with authority in the matter; but I may be pardoned for stating what I feel to be certain guiding principles that should influence such work, especially about institutions built along colony lines.

1. For practical economy and convenience, two roads between the same points should not be planned when one would do without sacrificing too much of gratification of the sense of beauty.

2. For the same reason, do not plan two walks from one point to another when one will meet the requirements of both; remembering always that the colony plan means buildings far apart, necessitating the use of long roadways and walks built at great cost.

3. Buildings should not be located so as to necessitate great expense in overcoming a natural disadvantage of the site before building operations are commenced.

4. Unless necessity demands it, buildings should not be put up with their greatest surface exposed to prevailing win-

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ter storms, which make buildings more difficult and expensive to heat and afford less comfort to those within.

All these points may seem trivial; but in reality they can assume unpleasant and most expensive proportions in the building of a colony for 1,500 or 2,000 people.

It is in the form and type of construction that we strike squarely upon the one great essential of the colony plan and so provide for success; and if we neglect this we shall surely meet disaster.

Roman history tells us that the word "colonus," as used under the later Roman emperors, meant "an agricultural laborer, a serf bound to the soil." Another definition of the word "colony" is "The territory occupied by new settlers or their descendants;" another still, "a number of persons of the same occupation residing in a particular community." But perhaps the definition having the truest analogy to the colony plan and purpose is the following: "A stock (or colony) of bees, consisting principally of workers, but having, when perfect, one queen, and at times many drones."

The innumerable hives picturesquely scattered through sweet-smelling fields, or dotting the clover-covered ground beneath fragrantly blooming old apple-trees, stand, in colony life, for contented and happy homes; the ceaseless hum of the wings of the busy little toilers stands for the activity of head and heart and hand of the inhabitants of the colony, each striving for the common good; while the inevitable drones of the hives find their prototype in the lame, the unteachable, and the mentally blind among the colonists, who are driven to seek refuge in such a home.

In an ideal colony for epileptics we should build unpretentious houses and not construct great architectural masses, gloomy and depressing, as places to live in. The houses should be homes, and planned and built, furnished and con-

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ducted, as such. They should be as complete prototypes in every respect of the homes of ordinary well-to-do people as it is possible to make them.

From a knowledge acquired through experience in an institution where home-life was impossible, and from a knowledge of the home-life conditions prevailing at the Craig Colony, I have come to believe that the home instinct, the love of home associations, and the desire for pleasant and sympathetic companionship are the last of the natural desires to die in a people who suffer mental enfeeblement or decay through chronic and far-reaching diseases. These people are perpetually longing for home, and it would seem that an enlightened and uplifted civilization that assumes the care of such people at public expense, would fully appreciate their wants and necessities, and give them, as far as possible, that which they so earnestly desire.

It may be claimed that the cost of building cottages or small houses for patients is greater than for one building accommodating hundreds; but I believe that this opinion is erroneous, and am prepared to submit evidence that such is the case. The idea that vast numbers of certain classes should live under one roof has prevailed up to this time chiefly through misconception, and through too great a reverence for long established precedents. I cannot feel that the material care of public dependents has kept pace with progress in their individual treatment. The alienists, the neurologists, the skilled physicians, and the men upon whose shoulders fall the multiplied burdens of medical, scientific and business administration of the great public hospital charities, have not, it seems to me, been fertile enough in devising and suggesting new methods and principles in construction and sanitation; have not, perhaps, labored as hard as they might have to educate public opinion to the urgent necessity for

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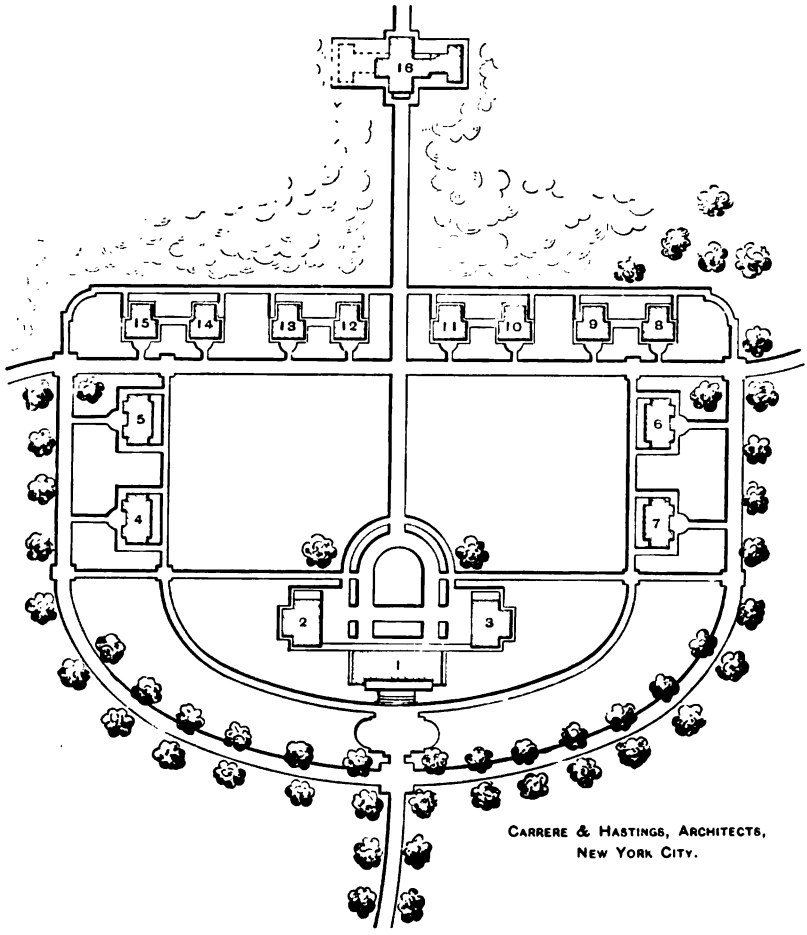

GROUND PLAN OF A GROUP OF COTTAGES FOR 400 WOMEN AT THE CRAIG COLONY FOR EPILEPTICS, SONYEA, N. Y.

Building No. 1 is for medical officers and assistants who have the immediate supervision of the group. Cottages 2 and 3 are for children, each cottage having a capacity of from 30 to 40. Each cottage is complete in itself, with schoolrooms, play-rooms, kindergarten rooms, rain-bath, etc. Cottages 4, 5, 6, and 7 accommodate 30 adult women each, of the middle class. Cottages 8, 9, 10, 11, 12, 13 14, and 15 are for women of the first class, each cottage accommodating 16 to 18 patients. Building No. 16 is an infirmary for crippled, bed-ridden, and helpless cases. The patients of Class One live in the eight small cottages, those of Class Two in all other cottages, with the exception of the infirmary, which is occupied by Class Three. The entire group of sixteen buildings is heated by steam from a central plant in building No. 1. The buildings are all two stories high. They are constructed of brick and painted white, with red roofs. The style of architecture is Spanish. The main building is called the Villa Flora, and all the other cottages bear the name of some plant, tree, or flower, the purpose being to plant about each one shrubs or flowers that have reference to the name of the cottage.

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new things; and public opinion, as an object of force, lies in close touch with the public treasury.

Do not believe that ideal colony buildings will be planned at the outset. Mistakes, due to the fallibility of foresight, will be made; consequently we should proceed slowly in the beginning, in order that we may profit by our own mistakes. A model colony should have the following buildings:

1. A house for administrative work, containing no patients, and to be regulated in capacity by the ultimate size of the colony.

2. A hospital building, complete in equipment and thoroughly modern in every respect, for the treatment of acute medical and surgical cases, and having, perhaps, attached wings or wards to be used as receiving wards for recent admissions to the colony.

3. Industrial buildings, operated continuously under maintenance; including laundry, power plants, and bakery, shops for new and repair work in wood, iron, printing, upholstery, leather, plumbing, painting, electric and steam engineering, tailoring, shoemaking, and dressmaking.

4. Industrial buildings for educational purposes; those for men to include sloyd school, trades school, carpenter shop, and nearly all the above, to be used in an elementary way by apprentices, to fit them for higher and more practical work along similar lines. For the women, it is my firm conviction that it will be difficult to teach them to take up and successfully prosecute any desirable number of trades that established precedent has placed in the hands of men; but if the women can be taught domestic work in all its branches, laundering, sewing, knitting and darning; to make all the clothing worn by female patients (as twelve women now do at the Craig Colony for some three hundred others); if they faithfully attend school in a useful arts building and acquire

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the very useful and essential knowledge of the many matters pertaining to domestic science and art; if they acquire a practical common school education that will be useful to them every day so long as they live, and learn the purpose of practical athletic exercises and gymnastics, the vast majority of them, stunted in mind and often in body, will have been helped to reach a height to which they may rightly aspire, or to which we may reasonably hope to help them.

In the public institutions of America, except a few in the South, women have not proved good farmers, gardeners, or mechanics; nor do I believe that we can, nor is it essential that we should ever try to make them such. Still it has always struck me as singular that normal, ambitious women in the outside world could often rise to a man's work, and often do it better than their male competitors, while man cannot satisfactorily perform the labors and daily domestic routine work legitimately belonging to woman. But defective institution women fall far short of the normal kind in daily life; and while they may be able to do domestic work well in all its branches, the finer feelings of ambition and a desire for supremacy have been blunted or destroyed.

It is most unwise to fly in the face of nature, especially a perverted nature, by trying to force female charity dependents—never dependent without good cause—to acquire a knowledge of things alien to ambition and desire, and far and away beyond their powers of grasping, mastering, or comprehending. Heredity, too, often sets its relentless seal of "So far shalt thou go and no farther;" and while I would be loth to be considered the first to lose all that very essential optimism of view we need in dealing with these people, I see no reason why we should deceive ourselves by saying white is black. We may counsel hope, but let us know when the best can be done and not waste valuable time in useless work.

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5. A farmstead group of buildings will be found essential. Barns for horses and cows, sheds for sheep and cattle, places for swine and poultry, and storehouses for grain should all be provided, for three reasons:

(a) They aid in sustaining the home idea principle by making the community complete in itself.

(b) Farm products help in lessening the cost of maintenance.

(c) Many colonists will find useful and congenial occupation in agricultural pursuits.

Indispensable adjuncts of great value to farm and garden interests will be the planting of orchards, and the cultivation of small fruits and berries sufficient for abundant summer use and for canning for winter. Vegetables and fruits, with few exceptions, are of great value in the dietetic treatment of epilepsy.

Going back for a moment to houses for patients, the model colony, in recognition of the peculiar needs of epileptics, will provide for three classes of dwellings, not including a hospital, as follows:

Class I. should hold anywhere from twelve to sixteen or eighteen patients, and these patients should be of the best; good enough in every respect to assume the entire care of the household in all its details, under the general supervision of one competent nurse or employee, who should look after sick patients and make accurate observations of the seizures for reporting to the physicians in charge.

These small cottages should be as homelike, cozy, and attractive as possible; and no room should hold more than two persons, while one-half of the patients should have single rooms. The half-dozen cottages of this kind now in use at the Craig Colony cost less than $390 a bed. They were designed by one of the best-known firms of architects in this

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country, and they are managed continuously without a jar, or without friction of any kind.

If insane, idiotic, or low-grade imbecile epileptics are debarred from a colony designed for epileptics who more nearly meet the normal requirements, then approximately twenty per cent. of all the colonists will be able to live in houses of the type of Class I.

Houses in Class II. should be large enough to accommodate from twenty-five to thirty-five persons, and should be in charge of two employees—cook and nurse, or housemother and housefather. These dwellings need to be more numerous, for in them the great middle class, numbering from sixty to seventy per cent. of the entire population, will find a home. They should have light and airy rooms; large hat and coat rooms, smoking- and sitting-rooms for men, and plenty of closet and shelf space, for most of these people find comfort in looking after their individual possessions; ample verandas, reading- and writing-rooms. To lessen the danger from fire, these houses should not be grouped closer together than sixty to seventy-five feet, nor more than 100 to 150 feet apart, in order that they may be heated from one central point, and that all the patients of a group may use one shower or rain bath.

Some houses need individual bathtubs for sick or feeble persons; but great economy of time will be gained if central bathing and heating points are established.

Class III. should consist of infirmaries—buildings combining home and hospital—for the use of perpetually bedridden paralytic, or otherwise helpless cases. These houses should be large enough at the outset, or so constructed as to admit of sufficient enlargement, to care for from ten per cent. to twenty per cent. of the epileptic colony, and one such structure should be provided for each sex. Each building should

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contain a small laundry and disinfecting plant, and especially constructed isolation rooms for patients suffering temporary mental disturbance or who are awaiting removal to a hospital for the insane.

Some special constructional features should be incorporated into all houses for epileptics, the more prominent of these being stairways broken by landings, to prevent patients from falling down the entire length. All woodwork should have the sharp corners and angles broadly rounded, to lessen the danger of cuts from falls during attacks; and all steam and hot-water pipes and radiators should be effectually covered or guarded, to prevent burning during coma following a seizure.

An ideal colony for epileptics will not fail to make provision for a modern hospital fully equipped for the best work, and for a laboratory for original study and research. It is not enough to feel that we have done our whole duty in providing homes for the care and maintenance of epileptics; a broader duty to humanity at large demands that we use to the fullest extent all the resources and faculties at our command for the scientific study and skilled treatment of this obstinate malady, not only on account of the incalculable good we may do those under our immediate care, but for the possible benefit of like sufferers at large.

Ordinary hospitals or communities are not capable of furnishing the rich field for labor that is provided in a colony for epileptics, in which the patient investigator and earnest student may toil incessantly; and it seems to me that when weighed in the combined balance of the greatest good to the greatest number, skilled medical treatment and earnest productive scientific research are of the first importance.

Progress is of infinitely greater value than standing still; and no community, hospital, colony, or any aggregation of

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epileptics can justly lay claim to the ideal when it has not made what provisions it could for all things that make for progress in the way of scientific study and research.

There is just one more minor point about the homes for epileptics, which perhaps, each colony may prefer to settle for itself, and it may be safely left to it, since no principle bearing upon the welfare of the colonists is involved; and that point is in regard to the general exterior design and class of buildings to be used. I think the managers of some colonies have proceeded on the principle that uniformity in shape, design, and the color of houses should not prevail; while at the Craig Colony, in New York, under the advice of some of the most eminent architects in the United States, thirty-seven cottages, comprising the main groups in the male and female divisions, are very similar as to exterior design and internal arrangement, but not as to capacity. They are all pure white outside, have red roofs, and are fairly pure specimens of Spanish architecture—a style that always lends an added beauty to appropriate settings of forests, verdant fields, and blooming flowers.

In preparing places of residence for assistants, we should constantly follow out the home idea principle; and for all heads of departments and chief officers, build cottages suitable for their use. In the country, where space is plentiful, it is better for reasons of health and individual comfort not to crowd the employees into a small space on the tenement-house plan, but to scatter them judiciously throughout the premises. By all means give them individual homes.

Organization { Administrative, Medical, Scientific.

The great lack of uniformity in the organic laws founding and governing public charities in various States, is largely

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due to the absence of a full and clear conception beforehand of the purposes of the institution and how they should be met, and to the inevitably changing conditions due to human progress.

Possibly no State will have more than one colony for epileptics, and since this colony will draw patients from all parts of the State, the managers or trustees should be so appointed as to represent the entire State. The Craig Colony—and I beg you will pardon me for occasionally presenting some of its ideal features—has a board of twelve members, one from each of the eight judicial districts of the State and four appointed at large, in order that the State with its seven millions of people may be more fully represented and that a quorum of six may be more readily obtained at the Board's regular meetings.

The managers are appointed by the Governor by and with the advice and consent of the Senate, and hold office for three years. They meet at the Colony in regular session every three months, and have three committees: A Visiting Committee—the only one required by law; an Executive Committee, to whom the Board may delegate its powers, and an Auditing Committee. These committees hold monthly meetings at the Colony.

States having a smaller population or less territory than New York, can have smaller boards and fewer committees. A thoroughly interested, efficient and working executive committee alone might suffice to do all the work done by many committees. Men possessing breadth of mind, scope of clear conception, without political bias, who are not driven by professional or business interests to forego the duties of a manager, and yet who possess good professional and business acumen, constitute an ideal class from which to make up a board of managers; and such boards, I know from a pleasant experience, are obtainable.

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The resident officers of a colony ideally organized should be as follows, their number depending in part upon the size and requirements of the colony:

Medical superintendent, appointed by the managers; first assistant physician, second assistant physician, third assistant physician, fourth assistant physician, woman physician, medical internes, pathologist, pathologist's assistant, steward, matron, chaplain or chaplains, all appointed by the superintendent.

The ratio of medical officers, exclusive of the pathologist and his assistant, should be one to every 100 patients. The Craig Colony now has seven medical officers and 700 patients.

We think it desirable to avoid even the appearance of partiality in religious matters, and so have a resident Roman Catholic and a resident Protestant chaplain. In some States or localities two chaplains may not be required, but it is always desirable to have one.

A force of administrative assistants filling the following positions, should be provided for: stenographers, bookkeepers, storekeeper and assistant, apothecary, sloyd instructor, musical instructor, teachers. Then should come competent heads of departments, each one capable of taking colonist apprentices under his care and training them in painting, blacksmithing, carpentry, printing, gardening, farming, tailoring, engineering, laundering, and other useful occupations. There should be an average ratio of one nurse or attendant to each eight or nine acute hospital cases, or other cases demanding constant care, while there should be an average of one nurse or attendant to each ten or twelve patients of the better class. Administrative assistants, heads of departments, nurses, attendants, cooks, and all other employees, should be appointed by the superintendent and be subject to removal by him for good and sufficient cause.

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The mistake should not be made of underpaying any of those who, under present systems of hospital work must be on duty twelve hours a day, and who are working for the welfare of a people so apt to be exacting, irritable, and fault-finding because of their disease. The simplest justice demands this. The laborer is worthy of his hire.

A training school for nurses should be an essential adjunct to the medical work. It is important that eyes be trained as to what they should see, and hands taught how and when to execute; and the desire on the part of nurses and attendants to do good work should be strengthened and sustained by leading them constantly up to a full appreciation of the value of the best work.

And now I want to go back for a moment and again speak briefly, but with all the force at my command, of the one thing in the planning and building of an ideal colony that will give the colonists more true happiness than any other single feature, and that is the establishment to the fullest extent of true and ideal homes; and after these are constructed take all pains to see that your selection of those to care for the colonists will bring into the work of the colony people who bear by nature a kindly and sympathetic disposition, an ear willing to listen in patience to burdening complaints, and a heart set upon the fullest performance of varied and trying duties. Nurses and attendants should work quietly, forcefully, tactfully and with discretion, and be the leading spirits in bringing light and sunshine into the lives of those under their care.

The system in vogue at the German Colony at Bielefeld, of employing young men and women as deacons and deaconesses, or housefathers and housemothers, paying them little or nothing for their services beyond their maintenance, but fitting them for missionary or future religious work of some

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kind, seems most admirable in Germany, and it would be well if some similar plan could be devised in this country.

It seems superfluous to repeat that any colony for epileptics should not, directly or indirectly, be under political influence of any kind or to any degree, for just so surely as such influence is permitted to creep in, the value of the institution's work will begin to creep out.

As to the necessity for the broader treatment of epilepsy, it would be a waste of time to attempt to prove it by force of argument. Every physician, scientist, alienist, neurologist, and philanthropist knows it; and if we seek to provide for this we can do so by the more universal establishment of colonies along ideal lines for these stricken children of the State.

When every State under our beneficent government shall have established a colony for epileptics, planned, built, and maintained on model principles, then the entire American people may feel justifiable pride in having provided for contraction instead of expansion in its territory of human suffering, now growing from generation to generation, passing from Territory to State, and going by leaps and bounds throughout this fair land of seventy-six million people; and I venture to express the hope that the time may come when the Federal Government itself will be justified in establishing such a colony.

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UNIVERSITY OF CALIFORNIA

STATE CARE OF EPILEPTICS IN MASSACHUSETTS.

BY WILLIAM N. BULLARD, M. D.,

PRESIDENT OF THE MASSACHUSETTS HOSPITAL FOR EPILEPTICS.

The first practical effort in regard to State care of epileptics in Massachusetts was, so far as I know, a paper entitled "Provision for the Care of Adult Pauper Epileptics in Massachusetts," read before the Clinical Section of the Suffolk District Medical Society (a division of the Massachusetts Medical Society) on the 17th of December, 1890.* From a considerable experience through my practice at the Boston Dispensary and elsewhere with the class of epileptics who were not in institutions, I had become convinced of the great need of some proper provision for epileptics in Massachusetts. I was not at that time aware that steps for special State care of epileptics had already been taken in other States (Ohio and New York).

In accordance with suggestions made at this meeting, a committee was appointed to bring the matter to the attention of the Massachusetts Medical Society at its annual meeting in the spring of 1891. This was done, and a committee of five fellows was appointed by the Massachusetts Medical Society to consider this subject and to take such active measures in regard to it as might seem to them best.

This committee drew up a bill for the creation and establishment of a State institution for epileptics, which was pre-

*Printed in the Boston Medical and Surgical Journal, January 8, 1891.

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sented to the Legislature in the winter of 1891-92, but failed to pass. Similar bills were presented each following session of the Legislature, and twice Governor Greenhalge recommended favorable action on this matter in his inaugural address. At last, when the bill was introduced for the fourth year, it met the approbation of both Senate and House and was signed by the Governor. On the 5th of June, 1895, was approved, "An Act to establish the Massachusetts Hospital for Epileptics."

This institution was placed at Monson, on the premises at the time occupied by the State Primary School, which was abolished, and all the lands belonging to said school and all buildings and personal property thereon were granted to said hospital. The government of the hospital was vested in a board of seven trustees, and the sum of $160,000 was granted for the construction, alteration and repair of buildings to provide for two hundred patients. The trustees found that the principal buildings then existing, with the exception of the barn, which was new, were totally unsuitable for their purposes; and these were at once pulled down and plans were made for the erection of small cottage buildings, while at the same time a larger building appropriation was asked for, as that granted was wholly inadequate. The Legislature of 1896, however, did not see fit to grant the request for further assistance or to approve the plans for small buildings. In consequence, the trustees at once presented other plans, which were accepted, and erected the three principal buildings now in use. These are an administration building and two dormitories, each to contain one hundred patients—one for males and one for females. The hospital was opened May 2d, 1898, by proclamation of Governor Wolcott.

The Superintendent, Dr. Owen Copp, was appointed in September, 1895. He had the supervision and direction of

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MASSACHUSETTS HOSPITAL FOR EPILEPTICS.

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the construction of the buildings and of the other work done upon the property. To his excellent judgment, care, and faithfulness was in large part due the fact that these buildings were so well and so thoroughly constructed, wholly within the appropriation, and that they have proved so satisfactory.

Since the opening of the institution it has been constantly filled with patients, and the demand for admission was such that in 1899 money was granted for the erection of five new buildings—a large dining-hall, an infirmary, and three small dormitories, one for males and one for females. These buildings are now nearly complete and will probably be ready for use in the autumn.

In April, 1899, the institution met with a loss in the resignation of Dr. Copp. In his place, Dr. Everett Flood, at that time Superintendent at Baldwinville, was appointed superintendent, and all the new buildings have been erected under his charge. The hospital seems to be now in a prosperous condition and able to do excellent work for the class of patients for whom it is designed.

I cannot close this paper without mentioning the fact that a large share in the work for the establishment of this hospital and much credit therefor is due to Dr. Henry R. Stedman of Massachusetts, an early member of the committee created for this purpose.

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WHAT NEW JERSEY HAS DONE FOR THE EPILEPTIC.

BY HENRY M. WEEKS, M. D.,

SUPERINTENDENT OF THE NEW JERSEY STATE VILLAGE FOR EPILEPTICS.

I cannot express my keen appreciation of the high privilege and honor of appearing before you as the representative of the New Jersey State Village for Epileptics at this the first annual meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics. When invited to prepare a paper for this meeting, my conscious inability to present anything worthy the attention of so learned and distinguished a body as this Association prompted me to decline. But when your Secretary kindly consented to accept a report of what New Jersey had done for the epileptic, I felt emboldened to lay before you the results of the untiring and zealous efforts of others under, at times, the most trying and embarrassing circumstances.

The first official action looking toward the special care of epileptics in New Jersey was taken in February, 1877, when Dr. John W. Ward, the superintendent of the State Lunatic Asylum at Trenton, and Mr. Charles Hewitt, a manager of that institution, went before the joint committee of the Legislature on Lunatic Asylums and asked for an appropriation to erect a separate building for the care of the epileptics then in the Asylum. The matter was agitated from that time forward, and in 1884, Dr. Ward again appeared before the committee and, upon the ground of the injurious effects on both

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the insane and the epileptics by association in the hospitals for the insane, strongly urged an appropriation of $50,000 for a building in which to care properly for the epileptics. For several years the Medical Directors of both State hospitals for the insane, alarmed by the continual increase in the number of epileptics and the crowded condition of those institutions, vigorously set forth in their annual reports the injurious influence on both the insane and epileptic from contact of each class with the other and urgently recommended their separation.

Professor S. Olin Garrison, the founder and Principal of the New Jersey Training School for Feeble-minded Children at Vineland, soon after opening the school in 1888, recognized the injurious influences of the epileptics upon the other pupils, and at once became a zealous advocate of a special institution for the epileptics. He continued indefatigable in his efforts to secure the desired end until removed by death, April 17, 1900. He made many sacrifices and gave freely of his time and energies to the establishment of the present Village. It was due to his personal efforts that the first commission, of which he was the secretary, was appointed, in 1895, to investigate the subject in accordance with the following resolutions:

"*Whereas*, It appears that there are hundreds of epileptic persons in this State, many of whom are in our insane asylums and institutions for feeble-minded, without those proper environments and that special care and treatment suited to their mental and physical condition; therefore,

"*Be it Resolved*, By the Senate and General Assembly of the State of New Jersey, that a commission of five persons, residents of this State, three of whom shall be physicians and two laymen, be appointed by the Governor, by and with the advice and consent of the Senate, to make careful investigation

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of this subject, and report at the session of the Legislature in the year one thousand eight hundred and ninety-six the results of their deliberations.

"*And be it Resolved*, That a sum not exceeding six hundred dollars be and is hereby appropriated to meet the necessary expenses of the said commission in visiting the two State institutions for epileptics in New York and Ohio, and that the Treasurer of the State, on the warrant of the Comptroller, shall pay the aforesaid commission the expenses assumed within the above-named limits of six hundred dollars, the commission first specifying in writing the items of expense.

"*And be it Resolved*, That this act shall take effect immediately."

Pursuant to these resolutions, a commission was appointed consisting of the following named gentlemen: P. C. Barker, M. D., of Morristown; William L. Newell, M. D., of Millville; John H. Ewing, M. D., of Flemington; Rev. James M. Buckley, D. D., LL. D., of Morristown; and S. Olin Garrison, of Vineland.

Circulars were addressed to over two thousand physicians and more than one hundred institutions, requesting information as to the number of epileptics under their care. More than three hundred physicians and above forty institutions of various kinds reported. The total number reported by institutions was 351, of whom 183 were males, 135 females, and of 33 the sex was not specified. The whole number reported by physicians was 709, of whom 310 were males, 215 females, and in 184 cases the sex was not specified; giving a grand total of 1,060.

In consideration of the fact that at least fifteen hundred physicians did not reply and fifty-nine institutions made no report, at the lowest estimate the total conceded epileptic population of the State must be more than two thousand.

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After its investigation, the Commission was convinced that too much time had already been lost, and strenuously recommended immediate legislation in behalf of epileptics. The report of the Commission so impressed the Legislature that a bill establishing a village for epileptics was unanimously passed by both houses, but it was vetoed by the Governor.

Dr. P. C. Barker, a member of the Commission, brought the matter before the Medical Society of New Jersey at its annual meeting in 1896, and offered the following resolutions, which were unanimously adopted:

"*Whereas*, There are many epileptics scattered in various benevolent and penal institutions of the State, where they are necessarily improperly cared for, and at the same time are objects of dread, and of more or less aversion to those around them; and

"*Whereas*, Experience has amply demonstrated that these unfortunates are not only far more contented with their sad lot and deplorable condition when gathered into a colony where they can engage in some congenial occupation and be surrounded by sympathetic companions, but they have fewer seizures and the percentage of recoveries is much greater than under any other circumstances or method of treatment; and,

"*Whereas*, The welfare of this large class of unfortunate fellow-citizens should, in our opinion, be paramount to any considerations of mere economy; therefore, be it

"*Resolved*, That this society hereby records its sorrow and regret that the Governor of our State withheld his signature from the bill authorizing the formation of a colony for epileptics, after it had passed both houses of the Legislature.

"*Resolved* further, That we will use our best endeavors to bring about the enactment of another bill, in the hope that it may meet a better fate, thus ameliorating the condition of a large class of unfortunates."

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The following year, Dr. Thomas J. Smith, the President, in his annual address to the society, most ably set forth the necessity of providing for the epileptics, and urged that the State authorities be importuned most earnestly to revive the movement initiated the year before to establish an industrial epileptic colony in our State.

The society unanimously voted that a committee be appointed, with power to present the matter to the Legislature, and urge the passage of an act establishing an epileptic colony. As a result of the action taken by the Medical Society, the Legislature enacted another law establishing an epileptic Village, and made an appropriation for the same. His Excellency, Acting-Governor Voorhees, promptly approved it, affixing his signature, March 26, 1898, and shortly thereafter appointed the following Board of Managers: Rev. James M. Buckley, D. D., LL. D., of Morristown; John H. Ewing, M. D., of Flemington; S. Olin Garrison, of Vineland; Thomas J. Smith, M. D., of Bridgetown; William S. Combs, M. D., of Freehold; and John W. Ward, M. D., of Trenton. The act required the Board of Managers to select a suitably located site within six months after their appointment, and to provide suitable buildings and proper accommodations and appliances, provided the cost of the same when completed should not exceed the sum of $15,000. It was the intention of the Legislature to give one of the State farms as a site for the Village, but the Attorney-General decided that the lands could not be parted with by the State except upon the receipt of their value.

This seemingly insurmountable obstacle caused an embarrassing delay. Meanwhile the managers carefully inspected many farms in all parts of the State, including five of the State farms. After examining more than 100,000 acres, the Board unanimously decided upon the "Maplewood" farm, containing 187 acres, which they purchased for $11,500. At

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the same time an option was secured on an adjacent farm, which contained ample meadows for pasturage, beautiful woodland, and a never failing stream of water, for $8,000. Some necessary repairs and improvements were put upon the house on the "Maplewood" farm, and the Village was formally opened for the reception of patients on November 1st, 1898.

Application was made to the Legislature in 1899 for appropriations for the erection of two brick cottages, the purchase of the adjoining farm, and the construction of water-supply and sewerage systems. The Legislature provided in the list of appropriations for these, and while it was plainly the purpose of the Legislature that the Managers should receive the money, through inadvertence the requisite legislation was not enacted, and only the sum of $6,000 for maintenance was available. This unfortunate occurrence seriously impeded the progress of the Village. For one entire year nothing whatever could be done.

It was soon apparent that more land was required to carry out the plan proposed for establishing the Village, and in 1900 the Legislature was asked to appropriate $8,000 to purchase a farm on the west, adjoining the property already owned, in addition to the one referred to above, on the east; also to make appropriations for the erection and furnishing of two brick cottages for patients, and for providing water-supply and sewerage systems, all of which were granted.

The purchase of the two adjoining farms, with a few alterations and repairs to the buildings, enabled us to provide accommodations for a limited number of adult patients of both sexes. The erection of the new cottages was commenced as soon as circumstances would permit, and they are now nearly completed, with all the modern improvements.

The Village is located in Montgomery township, Somerset

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County, about one mile from Skillman Station, on the line of the Philadelphia and Reading Railroad. The location is one of the most beautiful and healthful in the State, and is admirably adapted for the purposes of this kind of an institution. The three farms contain 500 acres of slightly rolling land, with woodland, meadows, springs, and running streams. There were six buildings upon the property when purchased, all of which are in use—one as an administration building and residence of the superintendent and the steward, two are used for patients, and the others are occupied by employees.

The proposed plan of the Village is to enter the grounds from the public road at the west end of the tract by a broad avenue extending from west to east through the entire Village. About 1,500 feet from the entrance the administration building will be situated, facing the public road. North of this and near the boundary line of the property the residences of the first assistant physician and the steward will be erected, and south of the administration building about the same distance from it, the superintendent's residence will be built. About 500 feet east and in the rear of the administration building the ground gradually rises to a plateau. Upon this the group of cottages for men will be erected. The two buildings soon to be occupied are situated here. East of this group, on the north side of the main avenue extending about 2,000 feet, is the athletic field, on the north side of which will be situated a building for children, containing officers' and teachers' quarters, schoolrooms, dining-rooms, attendants' rooms, and the dormitories. On the south line of the athletic grounds, on the avenue, the gymnasium and natatorium will be located. East of this, on the opposite side of the avenue, upon a prominent knoll, it is proposed to erect the chapel, library,and amusement hall; and east of these, upon another elevation,

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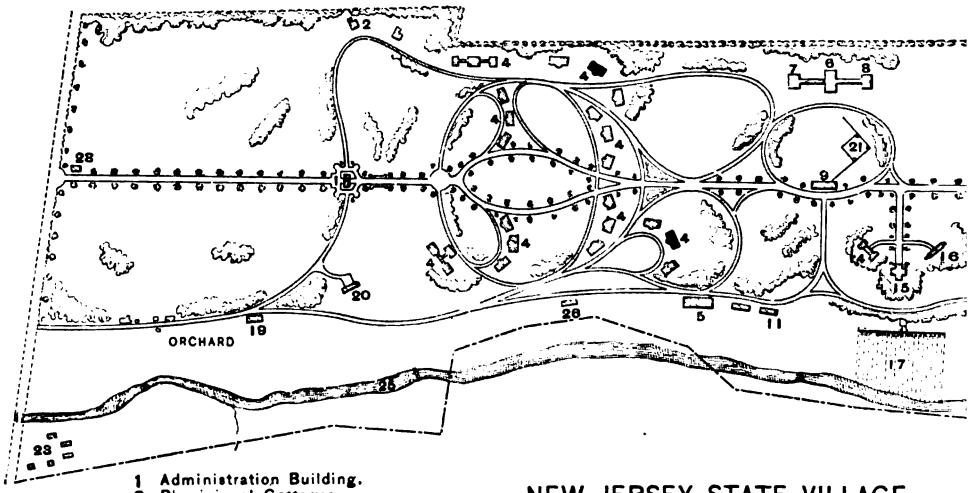

1 Administration Building.
2 Physicians' Cottages.
3 Hospital.
4 Cottages for Men { Proposed / Constructed
5 Power House.
6 School.
7 Boys' Cottages.
8 Girls' Cottages.
9 Gymnasium.
10 Laundry.
11 Men's Factories.
12 Women's Cottages.
13 Women's Factories.
14 Library.
15 Church.
16 Society Hall.
17 Sewage Disposal.
18 Farm Buildings.
19 Superintendent's Stable.
20 Superintendent's Residence.
21 Athletic Field.
22 Tank.
23 Employes' Cottages.
24 Cemetery.
25 Ice Pond.
26 Ice House and Stores.
27 Building for Excitable Patients.
28 Gate House.
29 Laboratory.

NEW JERSEY STATE VILLAGE
FOR
EPILEPTICS
AT
SKILLMAN, N. J.

GENERAL PLAN.

SCALE 800 FT. TO THE INCH.

Charles W. Leavitt, Jr.,
Civil Engineer,
15 Cortland St., N. Y.

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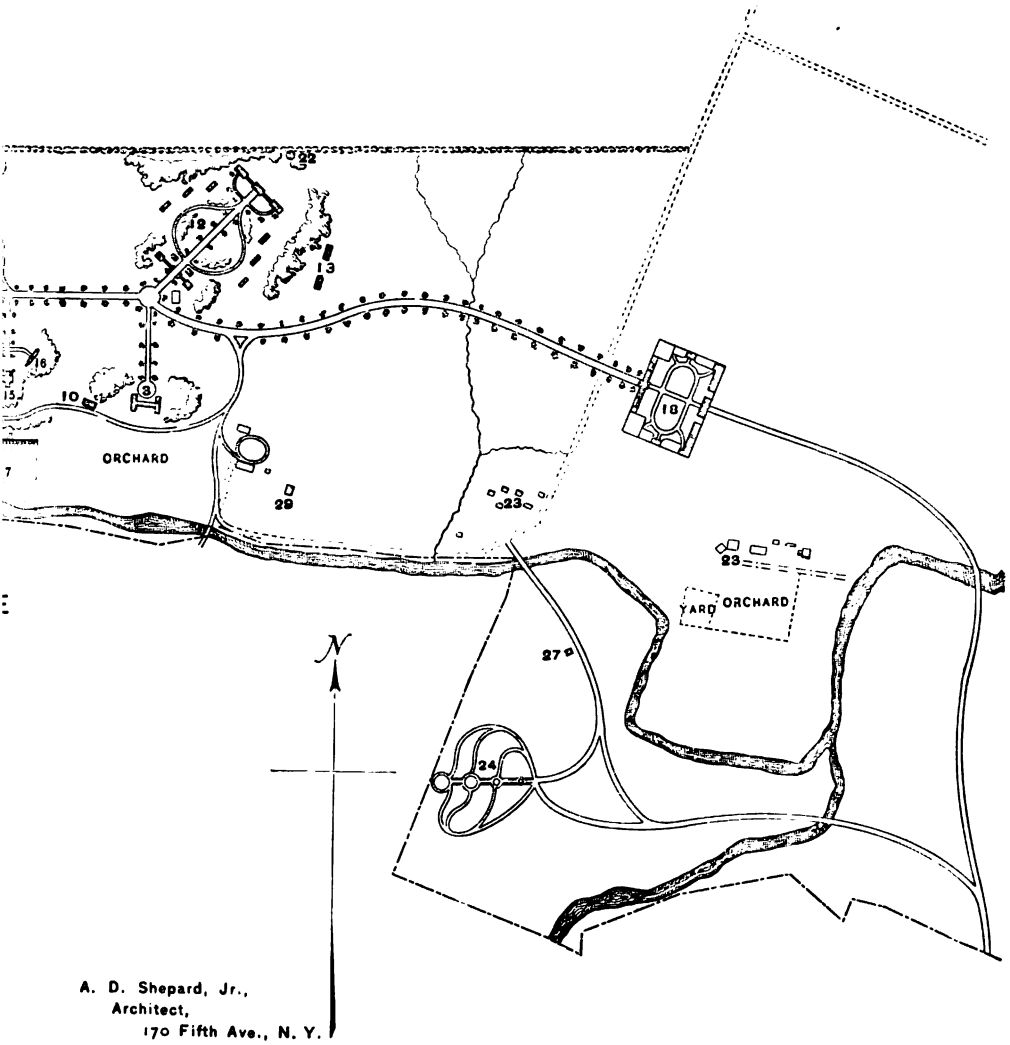

A. D. Shepard, Jr.,
Architect,
170 Fifth Ave., N. Y.

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the hospital will be placed. The laundry and the laboratory will be situated on the southern slope of this knoll.

From the eastern end of the athletic field the ground rises slightly to another plateau, and upon this the group of cottages for women will be erected, in the rear of which will be the industrial buildings for the women. East of this the farming land is situated with the Farmstead about centrally located.

In a quiet, restful field surrounded by trees, and remote from all other buildings, it is proposed to erect a building for excited patients. The power-station, storehouse, cold-storage, and the industrial buildings for men will be located on the south side of the plateau for the men's group of cottages, near Rock Brook, which flows along the entire south side of the tract.

In developing the plan as presented, it is the purpose of the Board of Managers to erect the buildings as the demand requires and the appropriations will permit.

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THE FOUNDING OF A STATE INSTITUTION FOR EPILEPTICS IN TEXAS.

BY B. M. WORSHAM, M. D.,

SUPERINTENDENT OF THE STATE LUNATIC ASYLUM AT AUSTIN.

In preparing a paper to be read before this Association, I find myself confronted with many difficulties. Not having had experience in the management of an institution specially designed for the exclusive care and treatment of epileptics, and my experience in the treatment of epilepsy having been largely confined to a limited number of cases of the insane class, it is impossible for me to offer any suggestions either as to the proper management of an institution or the treatment of this disease. For the past two or three years, however, I have devoted considerable time and study to the arrangement of grounds, buildings, and other equipments necessary in carrying out the advanced ideas of the colony plan adopted and so successfully operated in New York and other States; therefore I shall speak only of what has been done in Texas toward the establishment of an epileptic institution—the plans adopted for the various buildings, their arrangement and location, together with some reasons for such arrangement.

Since the establishment of Craig Colony, the advisability of creating a similar institution in Texas has been more or less discussed by the medical profession and others in our State. Two years ago, a bill was passed by the Legislature making an appropriation of $100,000 for an epileptic colony, and ac-

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cepting an offer made by the citizens of the town of Abilene, Taylor County, of 640 acres of land upon which the proposed institution was to be located. The bill provided that a committee should be appointed by the Governor to select the site. The committee was appointed, and the location made three miles from the limits of the city of Abilene. The bill had an objectionable feature, in that it stipulated that the amount of $100,000 should provide accommodation for five hundred patients. On this account, after plans had been prepared, no attempt was made to begin the construction of buildings, as it was against the policy of the Governor to erect cheap and defective structures.

At a special session of the Legislature, called to meet some eight or ten months later, the limit to the cost of the institution was removed; but the demand that five hundred patients should be provided for was left in the bill. Plans were perfected and bids advertised for, the lowest bid being nearly $500,000. This amount was so far in excess of what it was thought the Legislature had in mind the institution would cost, that all bids were rejected and active operations were deferred, in order to allow the next Legislature to pass upon the advisability of so large a sum of money being expended at one time for this purpose. Finally, the bill was amended by striking out the number of patients to be provided for and appropriating $200,000. Bids will again be advertised for at an early date, and as many of the buildings completed as the appropriation of $200,000 will permit.

A complete plot of the grounds and the proposed buildings has been made and adopted, showing the location of each building, the recreation park with drives and walks, the farm, garden, etc.; and this plot will be used as a guide for the future development of the institution.

The location possesses many advantages. The land is

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suited to all kinds of farming and gardening, and is especially adapted to raising all kinds of fruit. It will be possible to procure more land adjoining the tract, and I have advised that a much larger tract be purchased before the institution is opened for the admission of patients. The site selected for the buildings is an ideal one for good drainage; and the scenery and climate are perhaps unsurpassed in Texas, if not in the South.

I have had prepared a plan of the colony, and I herewith present it for your consideration. I think it will give you a better idea of the arrangements than any verbal description could do.

The buildings will be arranged in two groups—one for males and one for females. The groups will be separated by an avenue four hundred feet wide, with the administration building at the upper end, seventy-five feet in front of the first cottages of the groups, and equally dividing the distance between them. The building to be used for an assembly hall, gymnasium, and natatorium is located at the lower end of this avenue in exactly the same relative position to the lower end of the groups as the administration building is to the front. The distance between these buildings is six hundred and fifty feet, the grade line being fifteen feet lower at the assembly hall and rising to its height with almost uniform grade to the administration building, which is on the highest point of the grounds.

There are two rows of cottages in each group, separated by an avenue two hundred and fifty feet wide. At the upper end of this avenue and twenty-five feet to the front of the cottages, equally dividing the distance between the two rows, is located a residence for the assistant physician and other officers in charge of this group. At the lower end, and in the same position relative to the rear end as the building just described

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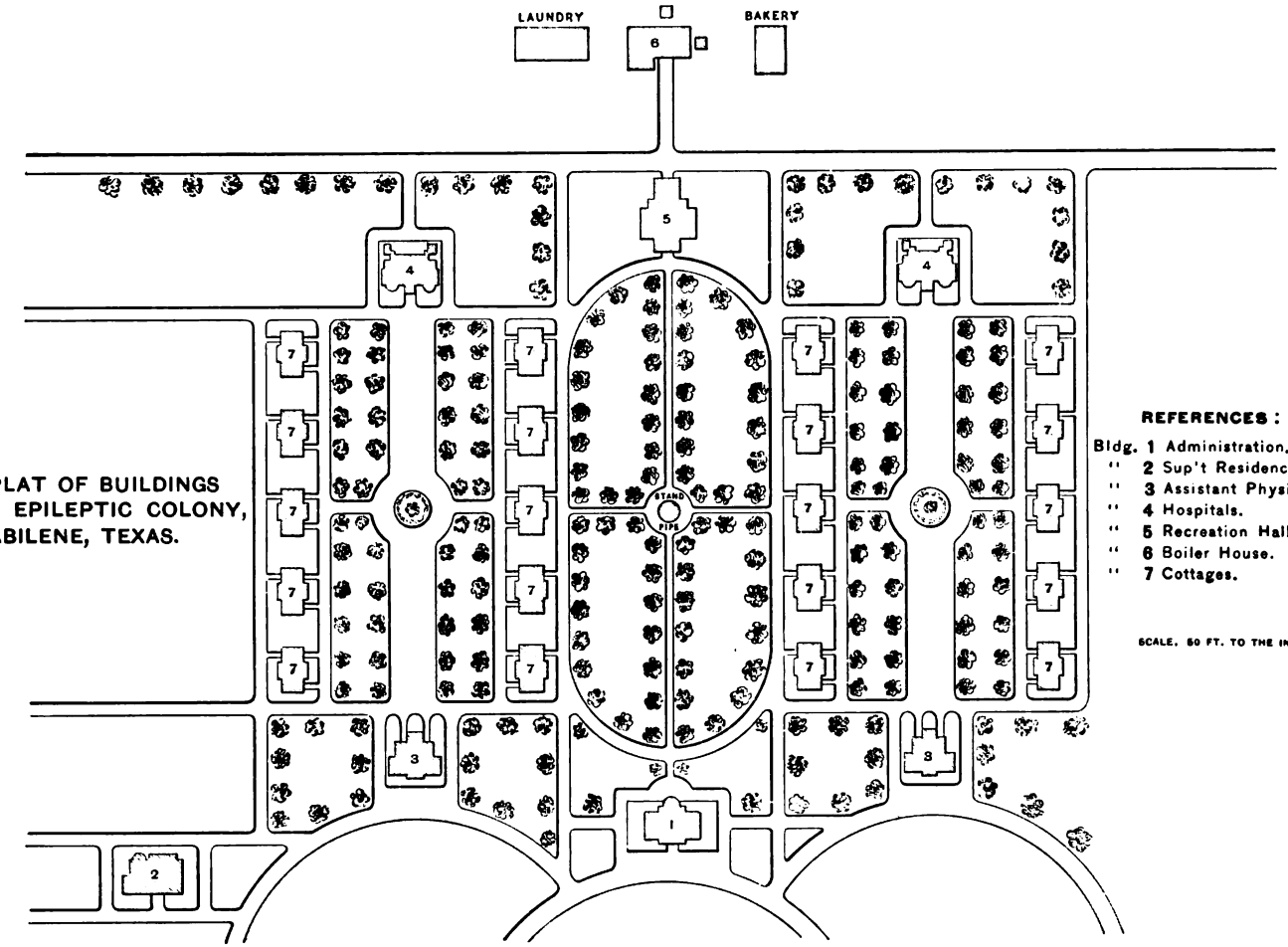
PLAT OF BUILDINGS
FOR EPILEPTIC COLONY,
ABILENE, TEXAS.



REFERENCES :

Bldg. 1 Administration.
" 2 Sup't Residence.
" 3 Assistant Physician.
" 4 Hospitals.
" 5 Recreation Hall.
" 6 Boiler House.
" 7 Cottages.

SCALE. 50 FT. TO THE INCH.

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is to the front end, is the infirmary building for this group. Each row consists of five cottages, and the distance from one cottage to the next is one hundred feet. The residence of the superintendent is located in front and to the extreme right of the colony, about six hundred feet from the administration building. In the rear of all the buildings of the colony are located the power, heating, and lighting plant, the ice-factory and cold-storage building, the laundry, etc.

The water supply will be obtained from an artificial lake one mile from the colony, which covers six hundred and fifty acres of land, and is the source of the water supply for the town of Abilene.

To recapitulate: The colony when completed will consist of an administration building, twenty cottages, one infirmary for males and one for females, the superintendent's residence, two residences for assistant physicians and officers, an assembly building containing a gymnasium and a natatorium, one central power, heating, and lighting plant, the ice-factory and cold-storage department, industrial buildings, barns, and dairy.

A complete system of sewerage connecting with each building merges into the main sewer, which extends to a creek one mile distant. The advisability of laying the main sewer on an embankment two feet above the level of the ground, and arranging it with gates two hundred feet apart for the purpose of irrigating the gardens on either side, is now under consideration. A plan similar to this, but on a smaller scale, is in operation at the Southwestern Hospital for the Insane, located at San Antonio, Texas, and the results have been satisfactory.

The buildings are designed to have plain brick walls, hipped roofs, with broad overhanging cornices heavily bracketed. The basement-to-sill course will be faced with Pecos red

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sandstone. The walls will be of light-buff brick and the roofs of gray slate.

The entrance to the administration building will be through an ornamental porch, the decorations of which will be Texas flowers and emblems conventionalized. The residences will be more ornamental, and of a style best adapted to the heat of the country, with galleries extending almost entirely around the buildings, and with projecting cornices. All the buildings are to have fire-proof construction of floors, ceilings, and roofs.

All halls and rooms in the cottages will be finished with quarter-sawed pine floors, enamel brick wainscoting five feet high, and walls plastered with Keene cement. The ceilings and cornices will be constructed of ornamental steel panels; all jambs to windows and doors will be rounded, and no woodwork except floors, sash and doors, and the least possible framing will appear. The stairs will be of open iron construction, with slate treads and landings and wood-finished handrails. Toilet-rooms will have floors of vitreous tile, and walls finished with enamel brick. All plumbing is to be of the best quality and placed in the most skilful manner.

Special attention will be given to the interior finish of the infirmary buildings, with a view to the very best sanitary conditions. The plastering will be troweled down to a smooth marble-like surface and afterwards painted with three coats of the best enamel paint.

The cottages are to be two stories in height with basements six feet above the ground and four feet below. In each basement story we propose to locate the kitchen, dining-rooms, storeroom, pantries, etc. The first story will consist of a large hall, a large dayroom, two single rooms, one room that will accommodate about four patients, and the toilet-rooms. The second floor will have two dormitories with room for ten

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or twelve beds each, two single rooms, a wide hall, clothing- and linen-rooms, a bathroom and closet.

After careful investigation and study of the needs of an institution of this character in the way of machinery and apparatus for motive power, heating, ventilation, refrigeration and water supply, I have decided that the most practical plan to adopt is to build a centrally located power-house, as shown on the plot plan of the buildings and grounds. The location of the power-house is such that the steam and water lines, the electric wires, etc., running to the various buildings will not be any longer than is necessary, and that all pipe lines will drain toward the power-house. In this building will be placed the boilers, engines, dynamos, pumps, water-heater, etc.

The pipes for conveying steam to the heating and ventilating apparatus in the various buildings, together with the hot and cold water-pipes, and the electric wires will be run in tunnels leading from the power-house to the other buildings. The tunnels will be of ample size, so that the pipes and wires can be installed after the tunnels are completed, and so that they can be inspected readily and repairs made at any time.

The boilers will be of the safety-water-tube type, divided into four units of two hundred horse-power each, and will be equipped with fuel-saving, smokeless furnaces. It is the intention to keep one unit in reserve at all times. These boilers will furnish steam to operate the light engines, pumps, heating and cooking apparatus.

There will be three electric-light engines and dynamos of the direct-connected type. One of these units will carry the minimum load by itself and two of them running together will carry the maximum load, leaving one unit in reserve at all times, in order to prevent a shut-down in case of repairs. These machines will furnish electric current, not alone for lighting the buildings and grounds, but also current to operate

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the electric motors to run the ice-plant, the water-pumps, the laundry machinery, the fans in the heating and ventilating apparatus in the various buildings, and any other motors that may be required for operating machinery in the industrial buildings. It was decided to have electric transmission of power on account of economy in operating widely scattered machinery, in preference to any other method that could be employed. The control of the various circuits for lighting as well as for motive power will be such that current can be turned on or off at any machine or in any section of a building without interfering with the operation of any of the other machines or apparatus of any building or section of a building.

Two pumps driven by electricity will be placed at the lake and connected with the power-house by wires. Each of these pumps will be of ample capacity to supply the maximum amount of water required daily, keeping one in reserve at all times in case repairs have to be made to the other. The water will be pumped to a stand-pipe, as shown on the plot plan, and from the stand-pipe will be distributed through a system of pipes to the various buildings and grounds.

A fire-pump will be placed in the power-house, the suction of the same being connected with the stand-pipe; and a system of water-pipes will be distributed throughout the grounds with fire-plugs placed near the various buildings. This pump will be automatically controlled, so that when water is turned on at any of the fire-plugs the pump will be automatically started, thus maintaining the desired pressure for fire protection at all times.

The various buildings will be heated and ventilated by means of the fan system, the fans being operated by electric motors. Fresh air will be introduced from the outside of each building through screens, then passed over heaters which consist of large coils of one-inch steam-pipe, and after being

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warmed to the desired temperature, the air will be forced into the warm air-flues built in the walls of the buildings, and delivered through registers in the various rooms. Ventilating flues will lead from each room to the attic, where they will be connected with a main horizontal duct, which, in turn, connects with a large ventilator in the roof of the building. Each heating apparatus is arranged with a by-pass connection, so that fresh, tempered air or hot air can be delivered into the various rooms as the case may require, depending on the temperature to be maintained. The admission of hot and tempered air is to be controlled automatically by means of the Johnson System of Temperature Regulation, and the apparatus so arranged that any desired temperature can be maintained in any apartment in any building, regardless of the outside temperature, and so that there will be a continuous circulation, the air supply being sufficient to secure a complete change of air in the building every ten minutes. The warm air is delivered at a point about eight feet from the floor, and the foul air is taken out close to the floor line through wrought-iron screens or registers. No radiators are placed in any of the rooms or corridors.

The exhaust steam from the engines and pumps will be utilized in the heating apparatus to the fullest extent by means of the American Automatic Vacuum System, and when the supply of the exhaust steam is insufficient, live steam will be admitted automatically, to make up the deficiency. By this system, exhaust steam is utilized without back pressure on the engines, being circulated throughout the entire apparatus at atmospheric pressure. In this way a great saving is made in fuel, and a higher efficiency is secured in the circulation of steam throughout the system than could be secured by the ordinary methods of heating.

The water of condensation from the various buildings and

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apparatus is drawn back to the boiler-room by means of a vacuum pump, to which the main return pipes are connected. This pump delivers the condensation into the feed water-heater, from which it is pumped back into the boilers. In this way not alone is a saving in fuel accomplished, but there is a large saving in water; and by returning distilled water to the boilers, scale is practically prevented. This system is in use in the State Lunatic Asylum at Austin, Texas, and in several of the other State institutions, where it is giving excellent results.

The ice-plant will be of the latest improved design and will be of ample capacity to furnish ice for the institution, as well as for the refrigeration of the cold-storage rooms, for meats, vegetables, etc.

In preparing the plans and locating the buildings in only two groups, as described, I am free to confess that I was prompted largely by economy in construction and subsequent operations. I am aware that the original colony idea carried with it the locating of cottages or groups of cottages at random and widely separated; but an institution arranged in that way would undoubtedly cost a great deal more to operate than would one arranged after the plan we have adopted. The former plan precludes the possibility of successfully operating a central heating plant, by which all exhaust steam that would otherwise be lost can be utilized for heating purposes, as can be done by the low pressure vacuum system that we propose to install.

Aside from an economic point of view, it seems to me that, with an institution scattered over two thousand or three thousand acres of land, the superintendent or his assistant physicians could not give the necessary personal supervision to each department of the colony that would insure their familiarity with the care and attention the patients were receiving at the

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hands of employees. By having only two groups of cottages, with a distance of one hundred feet from one cottage to the next, not only are beauty and symmetry secured to the institution, but it is possible to carry out the essential ideas that I have heard advanced in favor of the colony plan, namely; placing in each building properly classified patients not to exceed twenty-five or thirty in number, and having the affairs of each cottage conducted as a separate and distinct household, with its kitchen, dining-room, etc.

Some objection could be offered to the location of the kitchen and dining-room in the basement story, in view of the fact that some of the patients would not be able to go up and down stairs to their meals; but the infirmary will be large enough to accommodate most of the infirm patients. Arranging the kitchen and dining-room in the basement, removes them with all their objectionable features, from the floor where the patients will spend the time they are indoors during the day. It is the object to have the patients occupy the first floor exclusively during the day, as most of the sleeping apartments have been arranged on the second floor. This, I think, insures a better sanitary condition of the buildings throughout, and will enable us to keep the sleeping apartments in a well ventilated, orderly condition during the day.

The plan provides for but comparatively few single or isolated rooms; and this, I think, advisable, in order to give the night attendants a better opportunity to be in easy reach of all the patients, so that during seizures, accidents can largely be prevented. With a number of single rooms, it seems to me that many accidents might occur by patients falling, or turning on their faces and smothering in the bed clothing. I am aware that many objections have been offered to large dormitories; but when they are arranged to accommodate not more than eight or ten patients, as we have them planned,

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I am of the opinion that they are more desirable, for the reasons above mentioned.

It is the intention to care for the insane epileptics as well as for those who have not been declared insane; and while I have advised against this at all times, still I have come to the conclusion that perhaps it is well to do this. We all fully understand that even with the lightest forms of epilepsy, the mentality and proper conduct of the epileptic is uncertain and that at times he is wholly irresponsible for his acts; that epilepsy in all forms tends to the ultimate destruction of the mind; and that the insane epileptics differ only in degree from those who have not been considered insane. In the early history of insane epileptics, the mental disturbance is transient, and the length of time a normal condition is maintained, depends upon the proper control of their diet and habits and upon favorable environment. This history applies with variations to every case until the stage of dementia is reached, when the patient becomes untidy in his habits and disorderly at all times. This being true, and with an institution having grounds large enough for separate and distinct places for recreation and exercise, and cottages sufficiently separated to prevent one class from disturbing another, I cannot see the objection to caring for both classes under one management.

I believe it would be a great injustice to place epileptics suffering from temporary mental excitement in hospitals for the insane, where they would be deprived of conditions and skilled medical treatment and nursing that would be most conducive to their improvement, if it were at all possible to place them in an institution especially designed and equipped for the care and treatment of this class. It is, perhaps, a greater injustice to subject the patients in an insane hospital to association with epileptics, whose habits and conduct are so different.

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It is our purpose to keep the classes distinctly separated, by setting apart cottages for those who are suffering from temporary mental excitement or disturbance, and other cottages for those who are permanently deranged or demented. It has occurred to me that after an epileptic has been declared insane and confined in an insane asylum, there might be some difficulty in getting the management of an institution for epileptics to admit the case even after the patient had become quiet; and the expense of transfer, where the distance is so great between the institutions as it is in our State, would be considerable.

In conclusion, I think I can refer with pardonable pride to the liberality of the people of Texas in always being ready to make ample provision for the proper care of the unfortunate and defective people found within her borders. Within a few years I confidently expect to see the colony now under course of construction the equal in equipment, if not in management, of any similar institution in this or any other country.

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THE CONDITION OF EPILEPTICS IN PENNSYLVANIA.

BY WHARTON SINKLER, M. D.,

PRESIDENT OF THE BOARD OF MANAGEMENT OF THE PENNSYLVANIA EPILEPTIC HOSPITAL AND COLONY FARM.

It is much to be regretted that in a great commonwealth like Pennsylvania there is still but little provision made for the care and treatment of epileptics, and that there is absolutely no State institution exclusively devoted to the care of persons suffering from this disease. It is true that there are many large and complete modern institutions for the insane, for the feeble-minded and for the homeless poor, in which epileptics are received; but these do not provide for the proper care of a large class of epileptics who are neither insane nor imbecile, and therefore should not be placed in such institutions. The State has recently established a magnificent institution for feeble-minded persons at Polk, the capacity of which is 650. Of the present inmates 118 are epileptics. The question of caring for this unfortunate class by the State has been under consideration for several years, but so far little has been accomplished in providing for them.

In 1893, the Board of Public Charities of this State made a strong appeal to the Legislature to establish an institution exclusively for epileptics. Again, in 1895, the Board brought the matter to the attention of the Legislature, and in 1897 a bill was introduced in the Legislature, prepared by the Lunacy Committee, for the establishment of a State hospital for epileptics; but unfortunately this bill failed to pass.

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The need for separate institutions for epileptics is far greater to-day than it was in 1893, for the number of epileptics is increasing with the growth of the population. In 1893, the Board of Public Charities recorded 575 cases of epilepsy in the different State institutions. The same Board reports that, on September 30, 1900, there were 827 cases in the different State hospitals, asylums, almshouses and private institutions. This increase, which is apparently out of proportion to the growth of the population, is probably due to the fact that more epileptics have been received into State institutions, some of which, like the asylum at Polk and the State Asylum for the Chronic Insane at Wernersville, have been opened since 1893. A personal canvass by means of letters which I have sent to the different State and private institutions in Pennsylvania gives a still greater number of cases; and these figures are by no means complete, as the time at my disposal for the inquiry has been limited, and I have been unable to get replies from all the institutions in the State. Many have failed to answer my letter of inquiry, as the time has been rather short since it was sent; and some of the smaller institutions and private sanitariums I have been unable to reach. The replies which I have so far received, however, give the total number of epileptics in State and private institutions as 1,164, which are distributed as follows:

In State asylums and institutions for feeble-minded	854
In general hospitals and private sanitariums	177
In county almshouses	116
In jails	11
In homes for children and aged persons	6
	1,164

The census of 1900 gives the population of Pennsylvania as 6,302,115, so that even the incomplete returns which I have received, give a proportion of 1 to 5,414, who are in

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public institutions. There are probably twice as many epileptics who are cared for by their families, so that we are safe in assuming that in this State there is at least 1 to every 2,000 of the population.

It is difficult to estimate the number of epileptics in this State outside of institutions. Some idea may be formed of the number from the fact that at the Pennsylvania Colony Farm for Epileptics, where there is a capacity for only 50 patients, the number of applicants on the waiting list is 117; and in a few counties in which a rough estimate of the number of epileptics outside of institutions has been given by the county officials, the number varies from 20 to 100 in the county. The United States census for 1900 does not include the number of insane or epileptics in the United States, and the Commissioner informs me that, although later a census will be taken of the insane and feeble-minded, there is no provision made under the Act for determining the number of epileptics.

A large number of epileptics in the different institutions are undoubtedly able to do a moderate amount of work if given the opportunity. Of course, the great majority of the cases in asylums and other State institutions are insane, and are suitably and properly placed in these institutions; but there is no doubt that a great many of the patients who are detained in some of these places could be employed, not only usefully as regards contributing to their support, but could also be benefited physically as to the disease from which they suffer, by having healthy occupation.

There are two private institutions in the State, devoted exclusively to the care of epileptics; but both of these are on such a small scale that but a limited number of patients can be accommodated. The example of the Bethel Colony at Bielefeld seems to have inspired a Lutheran clergyman in

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Western Pennsylvania with the determination to establish a similar colony for epileptics in this State. In 1895, a farm consisting of sixty acres near Rochester, Pa., was secured, and a work begun in the name of the "Passavant Memorial Homes for the Care of Epileptics." The institution has a capacity of thirty-six, and at the present time there are thirty-five inmates. Insane epileptics are not admitted, nor epileptics who are unable to make themselves useful to a certain extent. The patients are employed on the farm, and have had excellent success in their agricultural pursuits. Vegetables and fruits and a considerable amount of hay and grain are raised, and milk and eggs for the use of the institution are produced.

The Pennsylvania Epileptic Hospital and Colony Farm, which is situated at Oakbourne in Chester County, about twenty-five miles from Philadelphia, was opened in February, 1898. The Farm consists of 110 acres, and is unusually well provided with farm buildings, for the former owner was a person of large means, and had equipped it and kept it up as a "model farm." The barn is a large and commodious one, with every modern appliance, and the dairy-house, which is placed over a large spring of pure, cold water, is a beautiful structure lined throughout with white tiles.

At present there are two buildings for patients, one for men and the other for women. Each of these buildings accommodates twenty-five patients. The women's cottage is filled to its utmost capacity, and the two vacancies in the men's cottage will be filled within a few days. There is a central administration building, which contains the kitchen, laundry, and bakery, as well as the living quarters of the Superintendent. The Superintendent's office, a room for the Board of Managers, a reception-room for patients, and a pharmacy are also in this building. There is also an industrial building

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in which the patients are employed during the winter months in carpenter work, cane-seating, brush-making, etc. In the third story of this building is a large room which, at present, is used for the various entertainments of the patients, and is a source of great pleasure and amusement to them.

During the summer months the male patients are employed in farmwork, road-making and general repairs, while the women have outdoor occupation in the vegetable garden and in cultivating flowers. During the year 1900 the value of the farm products amounted to a little over $3,000. This, of course, included the estimated value of the products consumed by the institution. Two hundred and thirty dollars worth of wheat was sold, and hay to the value of $400 was used by the live stock.

The benefit of a well-regulated life and constant outdoor employments to the physical health of the patients is very great, and in both of the institutions above mentioned a notable decrease in the number of fits which the patients formerly had, has been observed. It has also been noted that a very much smaller amount of medicine is required. The bromides are given in very much smaller doses and very little other medicine is required. At the Pennsylvania Colony Farm for Epileptics, one patient who had had several attacks each day, passed eight months without a seizure. Some of the patients passed an entire year without having an attack, and a considerable number had one fit instead of one hundred or more, as in the past. A decided improvement is also noted in the mental action and intelligence of all of the patients.

These results are entirely in accord with those obtained in the colonies for epileptics in Europe, as well as those in this country, more especially the admirable institution in New York State—the Craig Colony at Sonyea.

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EMMAUS.

BY W. J. ALEXANDER, M. D.,

PHYSICIAN IN CHARGE.

Emmaus, situated four miles from Marthasville, Mo., a town on the M. K. & T. Railway, was dedicated on July 2d, 1893. The general control is in the hands of a Board of Directors organized at the instance of the German Evangelical Synod of North America, whose former college buildings are now used for hospital purposes, these having been abandoned by the Synod some few years previous for a more favorable situation.

At present there is capacity for sixty patients besides the seven nurses and other attendants. The number of applications largely exceeding this number, a branch institution has been established at St. Charles, one building being completed and ready for use. The four old buildings are of stone; the new building at St. Charles is a two-story brick cottage with basement, and was designed to accommodate twenty patients. Other buildings will be erected as soon as possible. The estate consists of 410 acres—300 here and 110 at St. Charles. The number of admissions from the beginning has been 121.

The number of cured among those discharged I cannot with any degree of accuracy at this time ascertain. There is only one patient remaining here who has not improved. Many of the others have been afforded very great relief. One girl,

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aged seventeen, who entered in June, 1897, and had up to March, 1898, ninety-seven seizures, about 20 per cent. having been complete ones, has had none since the last-mentioned date, and has taken no medicine to prevent them for nearly three years. She is employed in the kitchen. One of the waiters in the dining-room last year was a former patient.

To those who can pay, a fee of $200 per annum is charged for adults and $150 for children. Those who are not able to pay the full amount or anything are also admitted, and the aim of the management is to accord the same care and treatment to all.

While the German language is mostly spoken in the Home and services are conducted in both German and English by a minister of the German Evangelical Church, Rev. C. F. Sturm, the Superintendent, neither nationality nor religion is considered in the qualification of an applicant for admission. To the Sabbath-day services all are invited, though none are unduly urged to attend.

As to the management of patients, those who have any experience in, or manifest ability for certain work, are, as far as possible, given opportunity to apply themselves in that direction. The aggregate of their productive efforts is thus brought up to the highest possible standard. Much of their finished work is far from that which would be expected of a vigorous, healthy and normal individual, but nothing more than they can do is looked for from their hands. It has been found that continuous employment in this way, whether immediately productive or barren in results, brings the greatest ultimate benefit to the patients, and happily, with the least waste of effort in the attempt to ameliorate their condition or effect a cure.

The building of a large bank barn gives employment this year to most of the men. Last year a basin at a higher level in

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the hills was completed, which supplies water for all purposes other than drinking, pipes carrying it to all parts of the buildings and garden. This was exclusively the work of the patients. Each year there is some clearing done, chiefly to secure the necessary firewood, the fertile land having been for many years under cultivation. Besides keeping up the necessary repairs, a constant effort is made to improve the property and further adapt it to its present use, and besides, to make the institution self supporting. As a very large proportion of the inmates are charity patients, the latter object has not been accomplished; and the deficit is made up in part by contributions from outside interested parties, but chiefly through members of the Evangelical Church. The women are employed in preparing the vegetables for cooking, in laundering, in making and mending their own and the male patients' wearing apparel, in doing fancy work, etc.

Recreation is given at stated intervals, and as the ideal with this class of patients much exceeds the real, and the pleasures of anticipation are much greater than those of realization, the looking forward to their Sunday ramble in the woods, to the summer picnics, and to other inexpensive means of enjoyment, if plans for such are opportunely presented to their ever changeful minds, excludes therefrom degrading thoughts, buoys them up, and precludes the practicing of their former bad habits and the excess of indulgence in present enjoyments. Just here I might state that the holiday season, bringing as it does all sorts of sweetmeats from home folks, is followed by its natural resultant—an increased number of seizures; and of late such gifts to a great extent have been withheld from them.

Everything in nature either advances or retrogrades, and since the phenomenon we call epilepsy is conceded to be one largely of neurotic origin, and since, of the small percentage

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of those cured, very few indeed exhibit a marked mentality, we must consider this disease a synergist in the process of degeneration; and in the care of epileptics as well as in the treatment of epilepsy it is well to take cognizance of this fact, and first of all, place the patients under proper surveillance and in a suitable environment, such as the colony life alone affords.

And here we know that continued and unremitting attention is necessary to effect a cure; that no medical treatment is of any avail without giving suitable food and withholding all that is injurious to the patient; that the mind must be properly occupied; that there must be enough work, physical and mental, during certain hours every day to secure proper rest for body and mind during the hours for sleep; that the patient's wishes to a reasonable extent should be considered in the choice of his occupation; and that when not at work, the mind must in some natural way be diverted to what is pleasing or stimulated by thoughts elevating and purifying, not forgetting that the teaching and inculcating of Christian doctrines with epileptics, young and old, is at this day doing much for this class of patients.

To speak of the medical treatment proper, it was thought desirable that I should investigate the results of the different medicines used by us since Emmaus was established eight years ago; and through the courtesy of Dr. Rembe, my predecessor in charge, I have been enabled to do so. The diminution in the number of seizures was considered as the most important manifestation of improvement, and the conclusion was easily reached that there was one chief method and that others were of minor importance. The one to which I refer is the treatment by the bromides with its adjuvant hypochlorization, or the withholding of free salt from the food. The bromides of potassium, sodium, and ammonium were used—formerly oftener, but later not more than three times daily.

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In some cases, as when attacks occurred on rising, they were given at bedtime; and in others, morning and evening, according to indications. In reducing the daily dose it was better done by omitting one or other of the three doses than by reducing the quantity of any or all of them. In suspending their use for the time, Fowler's solution of arsenic was used and occasionally borax. As to our experience with the latter drug, we find that the patient cannot tolerate it in any dose for a period much exceeding that necessary for the elimination of the bromides, and if given longer it will almost invariably produce gastritis. We found it was best taken three to four hours after meals.

As to the dose of the bromides, up to sixty grains daily were given to children, and up to one hundred grains to adults: this as a rule, though in a few instances a much larger dose was found necessary. With these same patients, after the dose was once established and the seizure level in their new surroundings found, one drachm had the same effect or was even better than two.

In establishing the dose, it was found necessary to watch the effect carefully; to see the patient every day, or at least twice a week, and have a daily report from the nurse or attendant; to give baths and high rectal injections two or three times a week, the bathing of course being suited to the individual case and necessary precautions taken to secure proper reaction; to keep the mouth clean, the bowels free, and the skin acting, and to apply to all parts of the body where rash made its appearance, hot wet borax compresses and zinc oxide dressings; in a word, to keep the whole organism functionating properly.

After establishing the dose necessary to control the seizures, the same precautions were exercised to maintain their use for the longest possible time without causing intoxication, or

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until their administration seemed no longer necessary—at least two years after the occurrence of the last seizure. Constant care was exercised lest the sedation caused by the bromides was disturbed by the change of habits. Active outdoor exercise followed by a period of indoor life with little to do, means more seizures; and this period prolonged produces bromism; thus proving, not a deficiency of bromine in the tissues, but a surfeit of same in the system. Again, when the patient was passing into new surroundings, arousing the dormant faculties of mind and body, thus causing increased elimination, more seizures resulted; and, anticipating these, it was found good practice to increase the dose of the bromides for the time being. This would happen in one given regular occupation not accustomed to it at home. In this connection I would like to say that it is our custom, on the patient entering the institution, always to place him under observation for a varying period of from four to six weeks, to ascertain the nature of the attacks, their frequency, etc., as well as to prove the efficacy of former treatment. It was found in a number of instances that the claim was made by friends of a patient that he was at this particular time doing well; was having fewer and fewer seizures; was, in fact, well on the way to recovery; that this, in their opinion, was due to a certain medicine recommended to them in which they had great confidence; but they had come to the conclusion somehow or other that their own home was not so good as ours in which to complete the cure. The first month or so without any medicine clears up everything to the mutual satisfaction of all concerned.

Other medicines were used at times to replace the bromides, but their comparative merits or demerits I shall pass over, to speak of hypochlorization as an adjuvant to the treatment of epilepsy by the bromides. This, the Tolouse method, so

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called after the name of the originator, was instituted by a series of experiments in Europe last year. It consists in the withholding of free salt from the food, the *rationale* of which is that bromine may be substituted for chlorine in the tissues; and as it is not the amount of bromine circulating in the blood vessels, but that incorporated in the tissues which determines the sedative action, it is evident this is a rational procedure, as has been demonstrated by results at Craig Colony and a few other large institutions of the kind in this country. Epileptics, as a rule, are very fond of salt, and we found it difficult to limit the quantity given; but, gradually done, it proved possible. There had previously been added to the food at Emmaus, to make it palatable, about three drachms daily; it has been cut down to about two scruples. The number of cows at the Home was not sufficient to place all on a milk diet, which is recommended as a good way to begin, gradually substituting a mild salt diet. Beginning on the 15th of February and gradually diminishing the quantity given, I take the results as shown by the total and average number of spells up to the middle of May. Comparing this with the corresponding months of the two previous years in the case records of nineteen men and nineteen women, I find the following:

1899										
March,	with	76	grains	bromides	the	average	of	spells	was	17
April	"	57	"	"	"	"	"	"	"	7.24
May	"	66	"	"	"	"	"	"	"	5.66
1900										
March,	"	67	"	"	"	"	"	"	"	5 57
April	"	78	"	"	"	"	"	"	"	5.25
May	"	73	"	"	"	"	"	"	"	8.33
1901										
March	"	71	"	"	"	"	"	"	"	6.18
April	"	51	"	"	"	"	"	"	"	4.20
May	"	54	"	"	"	"	"	"	"	2.66

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THE STATE CARE OF EPILEPTICS IN CALIFORNIA.

BY ANTRIM EDGAR OSBORNE, M. D.,

SUPERINTENDENT OF THE CALIFORNIA HOME FOR THE CARE AND TRAINING OF FEEBLE-MINDED CHILDREN.

Notwithstanding the laudable example of other States, notably those of New York, Ohio, Massachusetts and New Jersey, California has not done, as a State and officially, what has manifestly been her duty toward epileptics as a class, considering the number of epileptics here to be cared for, the opportunities at hand for their rational and scientific treatment, and the well-known attitude of the people toward forms of public charity. This must appear strange to the outsider who views her rather lavish expenditures of money for the so-called reformation of juvenile and youthful offenders (at Whittier and Ione), the generously supported five State hospitals for the insane (at Stockton, Napa, Ukiah, Agnews, and Patton), and the interest the Commonwealth has shown toward the superbly located and environed State Institution for the Feeble-Minded at Eldridge.

If there is one thing about which Californians are apt to exhibit an enthusiastic pride, after the climate, the fertility of the valleys, the fruits and flowers, and the gold in her hills have all in turn been duly "boomed," it is the fact that there is a very warm spot in their hearts for the unfortunate of every sort. All forms of distress, physical, psychical, and financial, find ready response, even to the extreme of mis-

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applied philanthropy and unmerited charity. This attitude constitutes the standing generous fault of the people; but it is a fault we can easily forgive when we realize that it arises from choice—that the Californian prefers that the thing shall be overdone rather than not done at all, or not done well. It is a notable fact that there pervades society everywhere on the Pacific Coast a genuine God-given impulse to assist quickly and lavishly whenever and wherever the cry for help is heard. It is only in the details of her giving that the State may be justly criticised. We admit there is much waste of energy as well as of means in the way she dispenses her aid and that we lack the thorough organization of the eastern States, through whose wiser, well-trained agencies the public bounty is no doubt better dispensed. But to this our reply is, that the very air we breathe, warmed by eternal sunshine, fragrant with the perfume of flowers, and vibrant with the potentialities of an intensely stimulated life impulse, tends, with the other stimulating influences of existence here, to stamp our personal efforts as showing what would be considered elsewhere a reckless disregard of economic factors.

A more thorough organization for the control and dispensation of charitably inclined energies will come later and almost of necessity, inasmuch as the State has now passed out from the period of settlement, which has been practically a period of speculative excitement, to the period of matured and more deliberate development of her matchless internal resources. Conservation of energies will follow organization, and somewhere, in due season, public charities will become the better classified, and consequently the rights of each class a little more quickly and thoroughly subserved.

That California has not established a line of State care for epileptics on a parity with her other public institutions must not be taken as indicating either her indifference or her in-

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tentional neglect in the matter of their well-understood needs. Much legislation has been secured and very ample appropriations granted for buildings, etc., to accommodate epileptics at Eldridge, but for reasons which may not be entered into in detail here, not one dollar of these appropriations has become available for said use. Some years ago the State recognized the favorableness of the broad acres at Eldridge for the establishment of a system of cottage care for this class, and by enactment the management of the State Institution for Feeble-Minded became the controlling management of the proposed epileptic colonies.

The sentiment of the State whenever expressed in the matter has been one of satisfaction with this arrangement, and this much having been apparently settled, the work has been allowed to rest—not through apathy exactly, but more from lack of active and general State organization, which might prod officials to greater interest and keep public sentiment keyed up to such a pitch that the unfortunate delays referred to here might not become possible. Moreover, there is a sort of general belief that the movement is going to come out all right after a while, so that the State will ultimately have an epileptic colony here equal to any, and in this feeling the writer shares; but in the meantime much valuable time is being lost and hundreds of patients are suffering for the State's tardiness.

The situation, then, to-day in this State is this: public sentiment well aroused and practically settled upon the need of having a State colony for all grades of epileptics; public content that this colony shall be under the control of the medical head and the same board of trustees as now are in control of the State Institution for the Feeble-Minded, and established upon the lands of this institution, but not immediately adjacent thereto, the large acreage of this institution

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permitting a colony for males to be located quite a mile distant from the feeble-minded and as far as this from the colony for females.

Each site proposed is sunny, well drained and watered, and of such elevation as to afford beautiful outlooks of mountain and valley. Native forest-trees alternating with cultivated tracts combine ideal facilities for work and recreation. The tracts are sufficient to accommodate many hundreds of patients and still allow of the widest range of personal freedom.

The number of epileptics cared for in the institution varies but slightly from month to month, and is on an average 150 including both sexes. These are of all grades, and for patent reasons are more associated with the phases of imbecility and idiocy as complications than would possibly follow were the separate cottages for epileptics available.

A rather sad feature of our present lack of accommodations is the intimate association of the epileptics with the feeble-minded. This is no objection of course when the patient has passed to some degree of mental enfeeblement, but it is an unfortunate condition when the epileptic is still in possession of his higher mental powers and keenly feels the injustice of the situation. This has been advanced by some as a reason why the colony should be under a separate management, but the criticism is not well taken for the reason that when the colonies are established as planned, there will be no association of epileptics with the other patients in the institution unless complications warrant it, and for all other patients as great a separation from all sources of institutional association will be insured as though the two works were many miles distant one from the other. As a rule, we now advise that uncomplicated cases of epilepsy wait, but many prefer association with the higher grades of the feeble-minded to waiting, so eager are they to get under regular hospital treatment.

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In conclusion, it is well to say that the fight in this State is on now to a finish, and that there are earnest men and women here who propose that neither political device nor parsimoniousness shall do more than possibly delay the day when California shall be able to take just rank with her sister States in the matter of the great work we are discussing. The hardest of the battle is certainly won. What we might now complain of as temporary set-backs may, after all, be providential delays, whereby we may profit through the experiences of others more active at this time.

It should be our aim to take advantage of what the East has demonstrated to be either good or otherwise. At any rate, it is more philosophical for us to assume that the delays we have been chafing under are intended to try our strength, humble our pride, tone down our vanities, and give us time for the development of such internal strength as may enable us to build for all time; and while we wait, may God in His mercy set to a wider gauge the instruments of His providence in the care and treatment of His unfortunate children—the epileptics.

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SKETCH OF THE PROJECT TO ESTABLISH A COLONY FOR EPILEPTICS IN ILLINOIS.

BY MISS JULIA C. LATHROP,

COMMISSIONER OF THE ILLINOIS BOARD OF PUBLIC CHARITIES.

For the last eight years there has been a continuous effort in Illinois to obtain suitable provision for epileptics. In May, 1893, an address was made before the Illinois State Medical Society by Dr. J. B. Maxwell on State Care for Epileptics, and since that time the Society has heard various addresses upon this subject, and through committees for securing legislation has shown its interest in the matter.

Eight years ago members of the State Board of Charities in visiting State and county institutions became deeply concerned by reason of the large number of epileptics who were either living in the poorhouses under conditions of great privation, or in State hospitals for the insane under a restraint almost as trying as the hardships of the poorhouse. A little investigation revealed enough individual cases of neglect outside of any institution to make certain, not only the great personal suffering, but the peril and cost to the State of such neglect. Accordingly, the reports of the Board for the biennial periods ending September 30th, 1894, 1896 and 1898, set forth the facts as far as ascertained and urged legislative action.

The State Conference of Charities in its annual meetings has given this subject much attention. The address of Hugh T. Patrick of Chicago before this organization at its meeting in Kankakee in 1898, and the address at Bloomington in 1899

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by Dr. Wm. P. Spratling, Superintendent of Craig Colony, were especially effective in creating public sentiment.

The Legislature of 1899 passed a bill directing the State Board of Charities "to select a suitable location for the construction of said colony and secure an option upon the same." The Board was directed "to have prepared suitable plans and specifications on the cottage system or plan for the construction of the necessary buildings and improvements of said epileptic colony, and to report to the Governor not later than thirty days before the meeting of the 42d General Assembly.

In accordance with this act the Board selected a site on the Mississippi River about thirteen miles north of the town of Alton. The property consists approximately of 1,630 acres of land with about one and one-half miles of river frontage, the bluffs rising abruptly from 200 to 400 feet. There is an unlimited supply of good building stone on the land and an abundance of sand and gravel. About one-half of the acreage is now under cultivation, one-quarter in splendid forest, and one-quarter in pasture and beautifully arranged parks. Two-thirds of the whole could be cultivated. There are two fine residences and several good farm- or tenant-houses with excellent barns, sheep-pens, and the like,—all in perfect order. An artesian well affords an unfailing supply of pure water. The drainage is of course perfect. The river and the railroad afford excellent transportation facilities. Accompanying the option from the owners of the land was a bond from the railway company guaranteeing to place a lift on the face of the bluff or to lay a side-track, as the Board of Charities should decide, free of all cost to the State. This location has the advantages of great natural beauty, a mild and equable climate, good soil for diversified operations in husbandry, and unusual advantages for industrial occupations. The

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buildings are such that it is immediately available, and working patients could be placed there upon the instant the Legislature should authorize the colony, so that building and the conduct of the farms could from the first be carried on by the beneficiaries of the colony.

Such was the location described in the report and bill presented to the Legislature in 1901. To the great disappointment of the public and, indeed, of many members of the Legislature, the bill failed to pass, though not from any attack upon the propriety and reasonableness of the measure. The site chosen was so ideal as to make it comparable to that of Craig Colony itself, and we can only hope that it will not be forever lost to the public through delay. It only remains for the Medical Society, Women's Clubs, Boards, and individuals who have thus far labored for the colony, to summon their determination for another effort.

At the time of the 1900 report of the State Board of Charities there were present in Illinois charitable institutions epileptics as follows:

County almshouses	335
State hospitals for the insane	404
Asylum for Feeble-Minded Children	112
Total	851

These figures are no guide to the total number in the State, nor to the number needing protection. For instance, the epileptic child is only received under protest at the Asylum for Feeble-Minded Children, and in 1898 there were on file at that institution 547 applications for epileptics. Upon the basis of the usual proportions recognized by authorities, there are doubtless between 8,000 and 10,000 people in the State of Illinois suffering from the disease of epilepsy, and from whose ranks the residents of the colony would be only too easily drawn.

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THE PRESENT STATUS OF EPILEPTICS IN CONNECTICUT AND THE FUTURE OUTLOOK FOR THEIR PROPER CARE AND TREATMENT.

BY MAX MAILHOUSE, M. D.,

NEW HAVEN, CONN.

I take the liberty of abstracting from a report * in preparation by a committee composed of members of the Connecticut Medical Society some of the facts and figures ascertained in their investigation. This committee found a total of 533 epileptics reported as such in the State, as the result of a circular sent out for that express purpose. Inasmuch as cases of *petit mal*, psychic equivalents, and others than the classic type were not reported, and also because of the fact (well known to the committee) that many failed to report cases, an estimate of one thousand cases in the State was considered not far from the actual number.

The condition as to environment of those reported upon is interesting, and is as follows:

In public institutions, 224, or 42 per cent. Of these, 121, or 22 7-10 per cent. of all, are in asylums for the insane; 9, or less than 2 per cent., in the Soldiers' Home; 4, or less than 1 per cent., in homes for incurables; 47, or 9 per cent., at the School for Imbeciles at Lakeville; 9, or less than 2 per cent., in sanatoria; 3 in jails and 30, or 5.6 per cent., in almshouses; making the above total of 224 individuals in the State whose

*See Appendix.

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ailment is the greatest factor in removing them from the class of bread-winners to that of dependents. Furthermore, thirty of these are in almshouses, where, it may safely be said, their treatment is limited to the routine administration of some bromide mixture, hit or miss, and their time disposed of without reference to their future welfare.

Notwithstanding the fact that the State Board of Charities has, since the year 1897, in its annual reports, made recommendations to the Legislature for the establishment and maintenance of a colony for epileptics, copied after the Bielefeld or the Craig Colony, nothing has thus far been done; and it seems probable that for some time to come, the indigent epileptic in this State will continue to be what he now is—a social outcast and a charge upon the county in which he resides.

Our further investigation revealed the fact that, of the total number of epileptics, there were but 114, or 21 per cent., who were fully capable of self support, and 51, or about 10 per cent., who could earn as much as half of what was needed for their support. Ninety-seven, or 18 per cent., had an earning capacity of less than one-half, and 215, or 40 per cent., were totally dependent.

The committee stated in its report that "there are at present within the State many subjects of epilepsy who are placed in such surroundings as to enable them to obtain but little of what is best for their comfort and the amelioration of their condition. The time of many is rendered unproductive to themselves and to the community, and many who, owing to their environment have and will become public charges, might, if properly treated, become more or less active toward improving their condition."

There is at present no State provision for the care and treatment of epileptics as such. If the individual epileptic is insane, he goes to the State asylum for the insane; if a child,

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and imbecile or feeble-minded, he may be sent to the School for Imbeciles at Lakeville; but if he is sane and capable of improvement or not, as the case may be, dependent or capable in some degree (more or less) of self support, the State takes no cognizance of his presence or condition, and he is permitted to work out his own salvation.

Such being the condition of affairs, what is to be the future of these unfortunates? At present, with increasing expenditures in all directions, with a State hospital for the insane which is being enlarged, and with a demand for a State hospital for the care and study of those affected with tuberculosis (for which purpose the sum of $100,000 has been asked and $25,000 appropriated), it would seem like building air-castles to expect that anything looking to the relief of the epileptics in this State will be done in the near future. However, with the path of duty so clearly and nobly set forth by our neighboring States of New York and Massachusetts, we sincerely hope that not many years will elapse before the State of Connecticut will include the epileptic under its grand old motto—*Qui Transtulit Sustinet.*

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THE PRESENT STATUS OF EPILEPTICS IN VIRGINIA.

BY WILLIAM FRANCIS DREWRY, M. D.,

MEMBER OF THE COMMISSION ON STATE CARE OF EPILEPTICS; SUPERINTENDENT OF THE CENTRAL STATE HOSPITAL OF VIRGINIA, PETERSBURG.

I shall be brief, my purpose being merely to present to this Association a *resume* of what has been accomplished, or rather attempted in Virginia in behalf of dependent epileptics. I shall not consume your time with a rehearsal of my personal views of the importance of such a public charity as a State institution for epileptics, for in this respect there can be, it seems to me, no difference of opinion; nor shall I discuss at length any special plan of giving needed relief to this class of dependents, for the so-called colony system has been clearly demonstrated to be entirely practicable and specially adapted to their requirements. It has passed the experimental stage.

The first important thing to do in an effort to establish any great public charity or enterprise is to get the people thinking about it—interested in it, and then to educate them to an appreciation of its benefits; in other words, to create a strong and favorable public sentiment, without which nothing can be accomplished.

Considering the conservatism of our people (Virginians I mean), the proverbial tenacity with which we cling to custom and tradition, the prudence with which we adopt new things,—progress toward making provision for this long-neglected class of dependent citizens has not been unusually slow. We

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are a humane people, and our sympathies go out to every class of human sufferers; but our coffers are not overflowing with glittering gold. Did the public revenues justify it, all dependent classes in our State would be properly cared for.

Though no provision has yet been made by Virginia for her dependent sane epileptics, for the past seven years the matter has been constantly agitated. The wide-spread ignorance and indifference regarding epileptics and their pitiable condition have, to a very great degree, been dissipated, and the people have been brought to a more thoughtful consideration of their real status in the community. The public mind has been aroused to a better understanding and appreciation of this terrible malady, and the public conscience awakened to a deeper concern about the sad condition of its unhappy victims.

There are evidences throughout the State of strong influences at work in behalf of these people. The medical journals, the medical profession, the public press, some humane organizations, the clergy, and many prominent individuals have all been stimulated to efforts in their behalf. If my impressions are correct, there is now a general public sentiment favorable to the great humane project of establishing a colony for their care and treatment; indeed, I believe there is little opposition to it. It seems now to be simply a question of ability on the part of the State to establish the colony. Since attention was called to the need of a colony for epileptics in 1894, * there has been a gradually growing sentiment in the State favorable to it.

The first organized effort to secure State aid for epileptics in Virginia was made by the State Medical Society in 1895. After the writer had read a paper on the subject, the following resolutions were adopted:

*Care of Epileptics on the Colony Plan by Dr. W. F. Drewry. (Virginia Medical Monthly, September, 1894).

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"1. That it is the sense of the Medical Society of Virginia that the State should make special provision for her dependent epileptics.

"2. That an institution for epileptics, conducted on the colony plan, commends itself to this Society.

"3. That a committee of five be appointed to present this matter to the Legislature and try to induce that body to give it the attention it deserves."

The committee appointed was composed of Drs. R. J. Preston, J. W. Nash, J. T. Graham, L. G. Pedigo and W. F. Drewry.

At two subsequent annual meetings the Virginia Medical Society again put its stamp of approval upon the proposed measure and appointed committees to urge the Legislature to establish a colony as early as practicable. Results followed. During the winter of 1895-96, the General Assembly adopted the following joint resolution:

"*Whereas*, It appears that there is a large number of epileptics in the State, many of whom are in our hospitals for the insane, in county and city almshouses, and in private homes, without proper environment, care, and treatment suited to their unfortunate and helpless condition, therefore be it

"*Resolved* by the House of Delegates (the Senate concurring), That a commission of five persons, residents of the State, be appointed—one by the Governor, two by the President of the Senate (one of whom shall be a member of the Senate and the other a physician), and two by the Speaker of the House (one of whom shall be a member of the House and the other a physician), to make a careful investigation of the subject of State care of epileptics and of the practical workings of the colonies established in New York, Ohio, Massachusetts, and elsewhere, and report to the next General Assembly the result of their investigations."

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The commission appointed as recommended consisted of Dr. G. W. Le Cato, Hon. W. P. McRae, Captain C. E. Vawter, Dr. E. M. Magruder, and Dr. W. F. Drewry. Dr. Magruder declined to serve.

After making a careful investigation into the subject of State care of epileptics, including an examination of the Craig Colony in New York and the Ohio Hospital for Epileptics, the commission submitted to the General Assembly of 1897-98 the following conclusions and recommendations:

"1. That every principle of justice and humanity is in opposition to the indiscriminate commingling of epileptics, the insane, and paupers of every class in the same institution; that neither the hospital for the insane nor the poorhouse is a suitable place for an epileptic.

"2. That, as a rule, epileptics in private families are necessarily deprived of the ordinary advantages of making a support for themselves, of acquiring an education, or of entering into any of the privileges or pleasures of life; but, on the contrary, they are a heavy tax upon others.

"3. That it would ultimately be in the interest of political economy if the State would assume charge of all indigent epileptics and provide for them suitable means and ways by which at least many of them would contribute to their own support.

"We would therefore recommend:

"First. That one of the State hospitals be utilized in part for the care of all the insane white epileptics of the State, thus leaving the two other hospitals for the accommodation of insane white persons who are not afflicted with epilepsy. At such hospital suitable buildings should be set apart *exclusively* for insane epileptics, so that their diet, employment, medical treatment, etc., could be regulated in the proper manner—things that are impossible to do when they are commingled

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with other patients. This policy was adopted at the Central State Hospital near Petersburg in 1896, where all the female epileptics occupy a separate building.* The result has been a benefit to both the epileptic and the non-epileptic insane of that institution.

"Second. That a colony, modeled in a great measure after the Craig Colony in New York, be established in this State for sane epileptics. There should be procured, either by purchase or by long-time lease, a tract of fertile, productive land —say 1,000 acres—in a healthful region, with an abundant supply of pure water, good natural drainage, and means for the ready disposal of sewage. The location should be near some large town, and easy of access from all sections of the State. Having selected the site, the colony should begin on a small scale and be gradually developed in a way that would seem best adapted to the needs and requirements of the class of patients for whose benefit it is established.

"In the beginning, only a few plain, inexpensive cottages, for the accommodation of—say 100 epileptics and the required officers and employees, and necessary outbuildings should be erected. Workshops and other buildings for various trades and industries, a hospital for the sick and infirm, a hall for recreation, a chapel, schoolhouse, etc., should be built later on, as the colony develops. Farming, gardening, stock-raising, fruit-culture, etc., should be prominent features in the beginning.

"Incalculable benefit would be derived from the school for educating the children and young people, and from the shops, in teaching many of the beneficiaries trades and giving them industrial occupations. Indeed, many would be enabled, under proper supervision, to support themselves entirely

*Last winter a building was constructed for the accommodation of the male epileptics.

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while under treatment in such a colony. The labor the patients would do, such as working on the farm, in the shops, taking care of stock, doing general work, etc., would, we think, make the colony nearly self sustaining.

"Third. That a pathological laboratory be established at the colony: for the collection of a large number of epileptics in such an institution, under the treatment of a well-equipped hospital corps, including a pathologist, would afford opportunities for a scientific study of this widely prevalent and almost irremediable disease, which would eventually lead to a more accurate knowledge of its nature and cause; hence, more satisfactory results from treatment. Furthermore, under skilled medical and surgical treatment combined with suitable dietetic, labor, and hygienic regulations, a goodly number would be restored, or at least sufficiently improved to go out into the world and earn a living for themselves.

"Fourth. That the colony be managed by a board of directors composed of not more than five members, to be appointed by the Governor, by and with the advice and consent of the Senate. The term of office for each member should be five years. .The board should appoint as superintendent a skilled physician, whose term of office should be not less than six years. The board should also appoint, (upon nomination of the superintendent) the necessary assistant officers, fix their terms of office, salaries, etc.

"In our opinion, the expense of establishing and equipping the colony should be borne exclusively by the State, but its maintenance should be paid for in part by the various counties and cities sending patients there—say $40 per annum for each indigent patient. Pay patients should be admitted on terms to be regulated by the board of directors.

"The commitment of pay patients should be voluntary on their part. Indigent patients should be committed by county

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or city authorities upon the certificate of a reputable physician. The number of patients receiving benefit from the colony should be proportioned among the several cities and counties. At first, as many as practicable should be taken from the poorhouses, hospitals for the insane, etc. From a list sent by the local authorities the board of directors and superintendent should select such cases as in their judgment would be most suitable for residence in the colony. The object of this would be to prevent the crowding in at first of helpless patients who could be of no service in developing the colony.

"The directors should be permitted by law to receive any gift or bequest of money or any donation to be applied, principal or interest, to the erection of buildings, to the support or education of the patients, or to the general use of the colony.

"Lastly, while we believe there is urgent necessity for such an institution as we have outlined, we think it would be the part of wisdom in establishing a radically new charity, to consider carefully every step; therefore, we would recommend that the General Assembly appoint, or authorize the Governor to appoint commissioners, whose duty it shall be to pursue this investigation further, and to get options on various sites, and submit plans, estimates of cost, and such other information as may be desirable or necessary to give the Governor and the Legislature full information preparatory to the establishment of an epileptic colony for the curative, scientific and economical treatment and care of epileptics in Virginia."

The commission was reappointed and requested to pursue the investigation further and report to the next session of the Legislature.

A bill providing for an appropriation of $35,000, with which

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to purchase a large farm and to construct thereon and equip suitable buildings, etc.,—in short, to establish an institution on the colony plan—was prepared by the commission and introduced in the General Assembly of 1899-1900. Much to our gratification, the bill passed the Senate with only four dissenting votes out of a total of forty. The bill reached the House, however, too late in the session to be acted upon, though a personal canvass of the members showed that a majority would have supported it; and, to the credit of the State, the colony would have been a reality. Efforts will be made again at the next session of the Legislature, and there is fair prospect that the measure will go through both houses.

There is some difference of opinion in our State as to the best disposition to be made of insane epileptics. I think, however, the stronger sentiment is not in favor of the suggestion made by the commission; that is, to have the colony exclusively for the sane epileptics, and care for all the insane epileptics in separate buildings at one of the existing institutions. It is probable that the commission will yield in the matter and recommend an institution for both sane and insane epileptics.

From careful investigations I am satisfied that there are not less than 4,000 epileptics in the State. In the hospitals for the insane there are about 300, or 10 per cent. of the hospital population. As near as I can ascertain, there are about 200 epileptics in the city and county almshouses and local charitable institutions; the jails harbor some in unspeakable misery; and more than 3,000 are distributed elsewhere throughout the State.

One has but to consider for a moment the great benefits that would come to these afflicted individuals, to the family, and to the community from such an institution, to become an earnest advocate of its early establishment. Reflect upon

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the status of the epileptic. Afflicted with a well-nigh incurable disease, tending to terminate in dementia, imbecility, insanity, and physical and moral degeneracy—a disease which is hereditary to a certain degree, that or some other neurosis being transmitted from parent to offspring with distressing certainty,—can one be in a more deplorable condition? Unfitted by such a malady for companionship with more fortunate fellow-beings, debarred from entering into fair competition in any field of human endeavor, deprived of ordinary pleasures and privileges, the poor unfortunate epileptic is practically an exile, and a burden to self as well as to others.

It is only at such an institution—an industrial and educational colony—that the humane, rational, and scientific treatment of epilepsy can be obtained. It becomes the duty of every physician, every humanitarian, indeed every good citizen to exercise his or her influence and put forth efforts for the amelioration of the deplorable condition of the epileptic. It will be a reproach upon this age of enlightenment, a reflection upon the benevolence and charity of civilization, if every State in the Union does not soon take steps to lighten the burdens of this afflicted class of our fellow-beings.

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EPILEPTICS IN NORTH CAROLINA.

BY MR. C. B. DENSON,

SECRETARY TO THE BOARD OF PUBLIC CHARITIES OF NORTH CAROLINA.

By request of the President, Mr. Denson addressed the Association on the afternoon of May 15th, respecting the condition of epileptics in the State which he represented. Mr. Denson spoke as follows:

Like those in the rest of the South, the epileptics of North Carolina are scattered in county homes, in insane asylums, and in some parts of the State in jails. It was my work to get a census of the feeble-minded and epileptics in our ninety-seven counties, that we might secure increased accommodation for the insane, if possible, and an institution for the feeble-minded, but without any hope that we should have any immediate organization for the epileptics. But that will have to come. We did succeed in getting much larger appropriations for the insane than had ever been made in the State. The institution at Morgantown, originally built for 450, has now 750. The one at Raleigh, which was organized in 1849 and opened in 1850 through the efforts of Miss Dorothea L. Dix, was built for 220 and now contains 430. There are large numbers of epileptics in these institutions, but most of this class are in the institution for the colored insane at Goldsboro.

There is a matter of interest in connection with the colored people that I would like to speak about. Before the

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war we did not know an insane negro. I never saw one—a negro affected with anything like acute mania, but the negro with fits was found everywhere; the feeble-minded and the epileptic negro was everywhere. There are now constantly to be found negroes with acute mania. Why? Has the negro risen in the scale or dropped? Was it epilepsy before? Is he feeling the influence of the new kind of life, a life that he never knew when he had the protecting—yes, I will say protecting—arm of the master over him?

The question presents itself to us in a new phase. We have issued a pamphlet calling attention to the necessity for relief, and much more money has been appropriated. Only those who need aid are to be taken at public expense. Those who have means are to be provided for in institutions. We are to open an institution in July. It is to be inspected by the State Board of Charities. T. M. Taylor, a citizen of Morgantown, will have charge. Any epileptic who has means can go there for treatment. But what shall we do with those whom the superintendents have resolved not to take into their institutions? That will be an acute question by and by. Now there is nothing but the county homes. We inspect them regularly.

We have a county board of three men and two women; we have got that far. The State Board of Charities was the first to give any official position to women, and we find that the two women outweigh the three men so far as intelligent, earnest support is concerned. We have a workhouse, and the convicts are made to work on the farm and grounds and in caring for the flowers. Ladies visit them and carry them the consolations of religion. That is the bright side. On the other side we have counties whose homes are at the bottom; they are zero almost. The epileptics there are shut up and have practically no care. That is the plain truth.

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We are at the bottom in this sort of work, but we do not mean to stay there. In regard to the proper care of epileptics we look to you for help. If there is any hope of cure, that will be a great argument. If you can show that there is a possibility of getting at this practically, it will help us immensely in our work.

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REPORT ON THE TREATMENT OF EPILEPTICS IN MEXICO.

BY SECUNDINO SOSA, M. D.,

OF THE NATIONAL ACADEMY OF MEDICINE.

[In compliance with a request made through the United States Ambassador at the City of Mexico, Honorable Powell Clayton, for information respecting the care and treatment of epileptics in the Republic of Mexico, application was made by the Ambassador to Dr. José Terrés, President of the National Academy of Medicine, whereupon Dr. Secundino Sosa was appointed by the Academy to respond to the request. EDITOR.]

Executing the commission with which I have been honored by the National Academy of Medicine, I proceed to give a *résumé* of the methods practiced in Mexico for the treatment of epileptics, remarking that the shortness of the time will permit me to refer to the capital of the Republic only.

There is no special establishment in this city for the accommodation and treatment of epileptics; but in the hospital for insane females (formerly Divino Salvador) and in the hospital for insane males (formerly San Hipolito) there are special wards for epileptics. In the hospital for females there are now seventy-nine epileptics in this ward. There are also in the ward for degenerates some epileptic patients and also three in the select ward, making a total of 118.

The best known internal treatment has been employed by the several physicians who have had charge of this branch; but at all times the use of bromides and belladonna has been preferred. Doctor Miguel Alvarado used valerianate of ammonia, arsenic with bromide of potassium and Gelinan's pas-

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tilles. During my attendance at the hospital I tried, in addition to these medicaments, subcutaneous injections of atropine, but I abandoned them because, in addition to their not giving a satisfactory result for the relief of the disease, I observed that they sometimes produced excitement. The epileptic convulsion, common among these female patients, was treated by me with calomel in small doses and purgative enemas, proceeding immediately to the exhibition of citrate of cafeine, with satisfactory results. When I observed that the epileptics were in a permanent state of cerebral congestion, I also used cafeine and the extract of *hierba de pollo* (*Commelina pallida*, Willd). By this means I endeavored to diminish or relieve the conjunctival injection, the cephalalgia and the torpor, but without obtaining any change in the number of the attacks. I also tried preparations of two other Mexican plants, of which I will speak later. At present, according to recent reports, the use of three associated bromides, potassium, sodium and ammonia, and the use of belladonna predominate, alternating these preparations in such manner that during one week the bromides are exhibited and the belladonna during the next, continuing the alternation in this order. Hydropathy is also resorted to in this establishment in the form of shower-baths given to some patients daily. I noticed in previous years that these baths served only to calm the excitement, and they are objectionable because they disturb the cerebral circulation and aggravate the congestive conditions.

With regard to the moral treatment, I should say that it has not made much progress because of the lack of proper means owing to the local conditions; but in Mexico the system of kindness and gentleness is observed, neither confinement nor the straight-jacket being resorted to unless absolutely necessary. In the hospital for males there are forty-

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eight epileptics, almost all in the common ward. In the treatment the bromides and picrotoxine are principally used. Hydropathy was much used in former years, but at the present day very little. The moral treatment is the same as has been described.

Some time ago, from 1890 to 1894, upon suggestion of the National Medical Institute, the study of medicinal preparations from Mexican plants commonly considered to be anti-epileptic, was begun in the asylums for the insane; these were indigo, the Puebla herb, and the *tumbavaqueros*. In the work entitled "Datos para la Materia Médica Mexicana" the results of this study are published, and I proceed to say a few words in regard to it.

The Puebla herb (*Senecio canicida*) composite, is so called because it grows near the city of that name, and is an active poison for dogs. The chemical analysis shows that its active principle is an acid called senecic. The physiological experimentation, first made by Dr. Maximo Rio de la Loza and later by Doctors F. Altamirano and Manuel Toussaint in the Medical Institute, shows that this plant, because of its active principle mentioned, is an active poison which acts upon the nervous centers and produces a series of phenomena resembling a severe epileptic convulsion. Doctor Toussaint, going further into the question, shows that its action is localized at the junction of the cerebrum and the cerebellum, the pons Varolii and medulla oblongata. Therapeutic clinical notes, taken first by Doctor Rio de la Loza and later by Doctors Oñate and Balbuena, tend to show that this plant, administered in powder of its leaves, in doses of 10 to 20 centigrammes daily, diminishes the number of the convulsions, and that it may be increased to 60 centigrammes, with observations of the effect of the medicine. I made several experiments in the asylum for the female insane, but I noted that

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the cerebral congestions were easily produced, which is in accord with the physiological experimentation; and two of the ten patients who were under this treatment having fallen into epileptic convulsions, I believed it proper to suspend its administration because of possibly dangerous results.

The *tumbavaqueros*, also called *tlacapan* and *tanibata*, (*Ipomea stans*. Cav.), has a universal popular reputation in Mexico for the cure of epilepsy. The chemical analysis shows the presence of a glucoside. The physiological experimentation in the Institute gave negative results, and even the purgative properties attributed were not observed, which is due to the fact that the plant is active only when fresh, as it contains a resin easily alterable. Doctor Govantes, who tried it widely in the hospital for insane men, concludes that it should not be considered as an anti-epileptic. I believe, nevertheless, from my own experience, that this conclusion is, perhaps, rather premature. The powder and decoction of the root have been used. This last preparation is of widest repute, and I believe that it should be subject to ratification or rectification.

Indigo (*Indigofera añil*), of which indigotina is considered to be the active principle, was exhibited, using the blue pigment, giving up to 40 centigrammes daily, in capsules, this dose being probably too small or light. The death of Doctor Govantes interrupted this course, but from what was observed it may be said that this medicament, purgative in large doses, administered in small doses has some effect in lessening the number of the epileptic convulsions.

The injections of Brown-Séquard (that of cerebrin) and the trepan also have been tried without noteworthy results; but these references, and others that I might make, serve only to show that in Mexico the therapeutic treatment of epilepsy has been studied with the negative or unsatisfac-

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tory results obtained throughout the rest of the world. The curative treatment of epilepsy will probably not be discovered until science shall have obtained more perfect knowledge in regard to the nature of the disease, as has occurred with the disease tetanus, the rational and efficacious treatment of which was not found until an exact scientific idea was had of the pathogeny of the disease.

The work undertaken in the United States to collect information relating to the treatment and cure of epilepsy throughout the world, is a great scientific effort; and the desire to found in that country asylums, hospitals, workshops, schools and colonies for epileptics is truly worthy of applause. If they should not be cured by these means, their condition at least will be bettered, the character of the epilepsy will be partially modified and, above all, a work eminently humane and directed to the aid of these unfortunates who wander in distress—often causing repugnance and inhospitality instead of sympathy, often incarcerated in jails, and oftener improperly cared for in insane asylums—will be accomplished.

It is to be regretted that our collaboration in aid of the "National Association for the Study of Epilepsy and the Care and Treatment of Epileptics" should be so meagre; but good seed is never planted in vain. We confidently hope that we may be able to respond more fully in the future.

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TREATMENT OF EPILEPSY IN BRAZIL.

[Through the kind courtesy of the Honorable Charles Page Bryan, the United States Minister to Brazil, the Association is favored with the following information in the form of a letter from Dr. Haoelburg, Medical-Deputy of the Consulate-General in Rio de Janeiro, as also an interesting paper by Dr. Brandao, a leading specialist of nervous diseases. (page 108.) EDITOR.]

Rio de Janeiro, 15th of April, 1901.

Honorable Colonel Charles Page Bryan,

Envoy Extraordinary and Minister Plenipotentiary of the United States of America,

SIR:—I beg to answer in the following brief *résumé* some points of view in regard to epilepsy, that you have especially referred to me.

My personal experience with epilepsy is based exclusively on observations of patients in my private practice. Epilepsy is very common in Brazil, and in all parts of this country. There are cases both of genuine epilepsy and hystero-epilepsy. The symptoms are not different from those of this disease in other countries. Epileptics often show distinct symptoms of an innate and hereditary neuropathic constitution. Syphilis of the parents, paternal alcoholic excess, a maternal neurotic disposition may be very often verified.

The first attacks occur from the third or fifth year of age and become more pronounced toward the period of puberty. Adult epilepsy first presenting itself in advanced age, has

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been, according to my experience, always a symptom of syphilis of the brain, and such cases have been permanently cured by an anti-syphilitic treatment. Moreover, by differential diagnosis incipient general paralysis has been excluded.

In regard to the treatment of classic epilepsy I have followed the principles and remedies generally used. I believe that a vegetarian diet employed as consistently as possible produces some benefit by reducing the number of attacks. I am not convinced of the curative effects of bromides. The method of Flechsig, however—a combination of opium with bromide—cured one of my patients. A poor girl of twenty-one years of age had epilepsy from her fourteenth year. She had used many remedies. By a strict application of Flechsig's treatment she was permanently cured. I see this patient now from time to time, and for six years she has had no return of her disease. She is a patient who is obliged to make her living by hard work; she is unmarried. I have sufficient data to exclude the diagnosis of hysteria.

In all other cases in which I have tried this method it has failed; but it is true no patient has systematically kept up the treatment.

From other medicaments that I have applied, such as atropin, salts of zinc with belladonna, and borax, I have observed no results.

Finally, I desire to state that there do not exist here any special remedies or measures that have not been successfully used and are not already published in current medical literature.

With great respect, I remain, Sir,

Your obedient servant,

(Signed) W. HAOELBURG, M. D.

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NOTES REGARDING THE TREATMENT OF EPILEPSY IN BRAZIL.

BY JWAR CARLOS FIXEUI BRANDAO, M. D.,

RIO DE JANEIRO.

In Brazil, epileptics are sent to the general hospitals and to the insane asylum, according to the symptoms of their disease. Their stay in these institutions is transitory or permanent, corresponding to the delirious period, to the determining circumstances of the epileptic symptoms, and the danger that may result if the patient is allowed liberty.

The treatment of epilepsy is always adjusted to the determining causes if the symptoms are not a consequence of a defect in the physical and mental development which has produced the instability of the nerve cells of the brain. In the Hospicio Nacional for the insane all the means recommended for the cure of epilepsy, even the ligature of the vertebral artery, have been tried without permanent beneficial results. In general practice, if the epilepsy is not induced by marked morbid causes, the treatment of bromides is applied either exclusively or combined with other medicinal substances. The bromides are generally administered continually in sufficient quantities to prevent the seizures. For preventing the effects of bromic intoxication, arsenic is generally added to the bromide. The ordinary dose of bromide does not exceed 3 grams for the day, and if by circumstances the attacks are repeated there is combined with the potassium

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of bromide (mostly used as being the most effective) other salts of bromides, such as of ammonium, sodium, lithium, etc. In case of failure by the bromides, either digitalis or belladonna, opium or adonis vernalis is added as prescribed by Flechsig and Bechterew. If bromides fail, borax is employed in a dose of from 75 centigrams up to 1 gram per diem. In cases of less gravity, nitro-glycerine, antipyria, etc., are used.

For the purpose of avoiding a threatened attack, long-accepted means are employed—ligature of the extremities (if the initial spasms start from them), amyl-nitrite, etc.

In cases of *status epilepticus*, in which the bromides are useless, inhalations of chloroform, of amyl-nitrite, have sometimes been effective. Hypodermics of morphine and chloral are sometimes used.

In the Hospicio Nacional there is employed with satisfactory results a medicinal substance of vegetable origin—*Leptolobium alegans*,—the efficacy of which we have also noted; and we regret that the shortness of time and the rapidity with which we are obliged to write this information do not permit us to explain in detail. Notwithstanding, we venture to communicate the studies that we have made concerning the medicinal and therapeutic action of the said substance, as well as the observation, which we are enabled to from the cases in which it has been applied.

As means of secondary assistance, if there exists an individual indication, revulsives are used, such as rowel, vesicatories on the neck, etc.

We also practice hygienic treatment. We oblige the patients to make use of as little exciting diet as possible, from which are excluded alcohol and coffee.

In Brazil, epilepsy caused by defect of physical and mental development constitutes an impediment to marriage.

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THE NATIONAL SOCIETY FOR EMPLOYMENT OF EPILEPTICS, ENGLAND.

BY G. PENN GASKELL, SECRETARY.

Some years ago, when your colony at Sonyea and ours at Chalfont were in contemplation, though not yet in existence, I ventured, in an article published in one of our medical journals, to compare—*si parva licet componere magnis*—the two schemes, the one the creation of the State, the other the product of private benevolence; and I well remember that I took the occasion to remark on the gratification we felt at the cordial sympathy accorded to our humble project by those interested in the corresponding movement in New York State. It seemed to me that, when one reflected on the magnitude and splendor of the Sonyea scheme, it would hardly have been matter for surprise if its promoters had felt a temptation to look down upon the small beginnings of our undertaking; and the complete absence of any such sentiment on their part impressed me as being, if I may say so, as honorable to them as it was pleasing to us. Since that time, amongst the many visitors to our colony at Chalfont, it has been our privilege to receive not a few of your compatriots; and I can truly say that none have looked upon our work with eyes so keen for the discovery of its merits or with more indulgent tolerance of its many defects than our ever welcome friends and kindred from your side of the Atlantic. With the recollection in my mind of many a manifestation of this kindly spirit, I

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received with profound gratification the request of your President and Executive Committee to contribute a paper upon the work of our Society; and the pleasure with which I undertake this task is tempered only by the one regret, that I am unhappily not able to accept their still more attractive invitation to be present with you in person on the important and interesting occasion of the first annual meeting of your admirable Association.

The National Society for Employment of Epileptics was founded in June, 1892; and its objects, as defined by its constitution, are as follows:

"1. To establish and maintain homes on the colony system, where persons suffering from epilepsy, yet capable of some occupation, may enjoy the advantages of regular life with healthy surroundings, and where, under the necessary supervision, they may, according to their age, sex, and condition, be educated, industrially trained, or suitably employed; and

"2. To promote the welfare of epileptics generally."

Directly, the establishment of the Society was due to the zeal of a few devoted workers of both sexes; indirectly, it may be regarded as the tardy outcome of a sense which had long been growing in the public mind of the duties owed by the community to its afflicted members. I propose, however, in this short paper to deal rather with the experiences of the Society than with its origin, and I must therefore pass over very briefly the early history of the movement. I will only say that from the very beginning we have owed more than I can express to the help and co-operation of the Charity Organization Society and the members of the medical profession, while the material progress that we have been enabled to achieve has been due mainly to the self-sacrificing spirit of a small band of supporters, who, by the abundance of their

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generosity, have splendidly atoned for the comparative insignificance of their numbers.

After some months of steady preparation, the movement was first brought prominently to the notice of the public by a meeting held at the Mansion House in January, 1893, under the presidency of the then Lord Mayor of London, Alderman Sir Stuart Knill. At this meeting the proposals of the Society were warmly advocated by (amongst others) the late Sir Andrew Clark, M. D., Sir James Crichton Browne, M. D., F. R. S., Dr. Thomas Buzzard, Dr. David Ferrier, and Mr. C. S. Loch. A number of contributions already given or promised were announced, and a letter was read from Mr. Passmore Edwards, in which that illustrious philanthropist offered to defray the cost of purchasing a suitable farm for the Society as the site of the proposed colony. It may be of interest to you to hear the characteristic statement made by him in his letter of the reasons which had led him to take this step. "I am induced" he wrote, "to do this for several reasons, and, among others, may be mentioned, that epileptics generally smitten with incurable infirmity are entitled to sympathy and support from their healthier and wealthier countrymen; that as a rule, epileptic people are incompetent to fight the battle of life with its fierce competitions; that, being removed from towns and employed in light and agreeable occupations in gardens or on farms, they would improve in health and enjoy a higher existence; that, being so employed, they would be useful to themselves and to the community; and also because England, with its vast wealth and advantages, should not be behind Westphalia or any other province or nation in shielding and assisting the children of misfortune."

The Society, as you will have gathered from the previous observations, is a purely voluntary organization. It has been established entirely by voluntary contributions, and is sup-

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ported partly from the same source and partly by the payments made for the maintenance of patients and the profits of the industries carried on by them. The ultimate authority over the Society's affairs is vested in the Governors, consisting principally of donors of fifty dollars and upwards (who are Governors for life) and of annual subscribers of five dollars and upwards (who remain Governors so long as they continue to subscribe). The Governors alone have the power of altering the constitution, and they elect annually the Executive Committee. By these means their supreme control could at any time be asserted; but in practice the responsibility for the proper management of the Society's operations rests entirely with the Executive Committee, and with its sub-committees and officers. The sub-committees are annually elected by the Executive Committee, partly, but not entirely from its own members, and they comprise a Finance sub-Committee, a Case Committee for consideration of applications and the selection of suitable candidates for admission to the colony, a Medical Committee, consisting of the members for the time being of the Honorary Medical Staff, and a Homes and Visiting sub-Committee, to which is delegated a very considerable share of responsibility for the general management and well-being of the colony. The Executive Committee meets fortnightly at the Society's office in London; the Homes and Visiting sub-Committee meets weekly, sometimes in London, sometimes at the colony, with which it keeps in the closest touch.

After the meeting at the Mansion House, the Society was financially in a position to commence operations, though on a very small scale, and the first endeavor was, of course, to find a suitable site. Concerning our efforts in this direction and their result, you will perhaps permit me to quote the following description from the First Annual Report of the Society:

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"Many farms in each of the home counties were visited and examined, but so numerous were the indispensable requirements with regard to situation, surroundings, soil, and water-supply, that for a long time a suitable site for the colony could not be found. At last, however, we met with the object of our search. Skippings Farm, Chalfont St. Peter, was visited, and found to be an almost ideal site for the purpose. It is charmingly situated at a height of nearly 400 feet above the sea, amidst surroundings full of natural beauty and historic associations. It is easily accessible, both from London and a large part of the country, and yet it is not too near to any large town. The water-supply is pure and abundant. The situation is exceedingly healthy, and the soil, though light, is very productive. Its surface dries quickly, and thus is eminently adapted for cultivation by spade labor in the wet seasons of the year. For the disposal of produce the farm is within cartage distance of the metropolis. It has been reported upon most favorably by some of the highest authorities in horticulture and agriculture. Mr. A. H. Bond, F. R. H. S., the late principal of the Royal Horticulture College at Swanley, writes: 'It would be difficult to find an estate better adapted than Skippings Farm to horticultural operations ....It is, in fact, all that could be required for fruit-growing and market gardening.'"

To this description I should add that the distance of Skippings Farm from London is twenty-one miles, its cost was $20,000, and its area 135 acres—a diminutive site indeed when compared with the magnificent domain of three square miles belonging to the Craig Colony at Sonyea. We are now, however, able to make some small addition to the area of our ground, and have entered into a contract for the purchase of an adjoining farm of seventy-five acres.

The twin villages of Chalfont—St. Peter's and St. Giles'—

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may, I think, not improbably be known to many of you who have not actually visited our colony; for this district is full of associations that make it dear to Americans; indeed, there is many a spot in the neighborhood better known to our transatlantic visitors than, I fear, to our own people; notably, Jordans, a beautiful dale, the abode of peace and calm seclusion, where stands the meeting-house of the Society of Friends, with its simple graveyard and the burial place of William Penn, from whom (if a purely personal reference may be forgiven) the writer of this paper is proud to claim descent —prouder still would he be if he could feel that he inherited some share, however small, of the inflexible resolution, the sincerity of purpose, and the nobility of character that so distinguished the great founder of Pennsylvania.

Skippings Farm, when the Society entered into possession, in 1894, had upon it a farmhouse, buildings and cottages, but no habitation convenient for the reception of epileptic patients. In order that no time might be lost, it was decided to erect immediately an iron building (afterwards known as Alpha House) with accommodation for eighteen epileptic men. This was completed in a few weeks, and our first patients, or "colonists," as they have ever since, in deference to their own wishes, been called, were admitted at the end of July in that year. In the following winter the foundation stone of the first permanent home was laid. This building was arranged to accommodate eighteen male colonists. It was completed in 1895 and was called the Passmore Edwards House, after the name of its founder; for, as at the Mansion House meeting, so on this occasion, and at many a subsequent time of need, the magnanimous spirit of Mr. Passmore Edwards led him to play the part of "fairy godparent" to the Society.

The Eleanor House (so named after Mrs. Passmore Ed-

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wards) was commenced in 1896 and completed in 1897. Other homes followed in succession. In the meantime (in 1894) some acres had been planted with fruit-trees, to which additions have been made from time to time, and we now have in all about fourteen acres of orchard. Various other small improvements, too numerous to mention, were gradually made on the estate, and the farm buildings were enlarged as the requirements of the colony increased. At the commencement some workshops had been erected, but in 1898 these were no longer adequate; and in accordance with the original intention, the use of Alpha House as a place of residence was discontinued, a part of it being utilized as a central kitchen and storehouse, and the rest converted into additional workshops. In 1897 a central recreation hall of iron was built, and in the next year a brick laundry was constructed.

In the following list are enumerated all the Homes at present in existence with the accommodation and the date of opening:

NAME.		
Passmore Edwards House,	completed	1895 for 18 men
Eleanor House	"	1897 " 26 women
Victoria House	"	1898 " 24 men
Greene Home	"	1899 " 24 men

	COMPLETED.	OPENED.
Milton House	1899	1900 for 24 men
Pearman House	1899	1900 " 20 women

Dearmer House, a small hospital for cases temporarily needing special care and treatment, with accommodation for five male and five female patients, was completed in 1899 but is not yet opened.

To supplement the foregoing table may I trouble you with another, showing the average number of colonists in residence during each year from the opening of the colony?

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PASSMORE EDWARDS HOUSE.

ELEANOR HOUSE.

VICTORIA HOUSE.

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	AVERAGE NUMBER.
1894 (August to December)	11
1895	24
1896	36
1897	38
1898	55
1899	64
1900	110

The number of colonists at the present time is 136, who, in respect of age and sex, may be classified thus:

AGES.	MALE	FEMALE.	TOTAL.
Under 16	10	2	12
16 — 20	19	9	28
20 — 25	18	13	31
25 — 30	15	6	21
30 — 35	9	6	15
35 — 40	6	3	9
40 — 50	11	6	17
50 — 60	1	1	2
60 — 70	1	—	1

All the homes and the various minor buildings (excepting Alpha House and the Recreation Hall) are constructed of red brick, with tiled roofs. In character they are simple but picturesque. In the construction of the minor buildings the labor of the colonists has been largely utilized, and we hope eventually to make use of it equally largely in the building of future homes.

It will be seen from the list that no new homes have been completed since 1899. This is due to the fact that in this country, for some considerable time past, the building trade has been so abnormally active that the prices of materials and wages have greatly advanced. In consequence of this, the cost of building in our neighborhood at Chalfont St. Peter, has been fully fifty per cent. above that of preceding years; and under these circumstances it has been thought advisable to wait till matters are restored more nearly to their former level.

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But for this, three other buildings for which the necessary funds had been provided, would ere now be completed; namely, an administration building, a home for 24 women, and a home for 24 male patients needing merely temporary care. Of these buildings, the last named has been already commenced, the donor being so strongly impressed with the urgency of the need that he most generously determined to bear the increased cost rather than let the matter wait for falling prices. This home, I should explain, is for convenience called a Convalescent Home, though it is intended for a greater variety of cases than the name would indicate. One of its most important objects, however, and the one from which it derives its name, will be to afford temporary care to those slightly afflicted epileptics who are able under ordinary circumstances to take their own part in the battle of life. Their peculiar misfortune is that, should they suffer from any ailment, they find themselves excluded, when recovering, from all the ordinary convalescent homes, so numerous in this country; their exclusion being due to a somewhat exaggerated fear that their fits would render them a source of danger to the other patients. The new home will be for male patients only, but we hope in time to have the opportunity of adding a similar home for the other sex.

Every home at the colony differs, both in its internal arrangements and in its outward design, from every other; but in each the accommodation includes two (and, in the case of Milton House, three) dormitories, a sick-room and two sitting-rooms for the colonists, bedrooms and sitting-rooms for the staff, a kitchen, scullery, larder, bathroom, lavatories, and other offices. With the exception of the Passmore Edwards House, in which the dormitories are up-stairs, the whole of the ordinary accommodation for the colonists is on the ground floor, the up-stairs floor of each home containing only the

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sick-room for patients, and bedrooms, bathroom and other accommodation for the staff and visitors. But this arrangement has been adopted rather because of its greater convenience for purposes of administration than from any fear of the dangers of stairs. The colonists take their meals in their own homes, and each house is complete in itself, except that the dinners and in part the breakfasts are cooked in the central kitchen, and conveyed in trollies to the various homes. The minimum distance of any home from its next-door neighbor is about thirty yards, and the arrangement of the houses, though based upon a preconceived plan, is purposely free from any obvious symmetry or geometrical regularity.

In the dormitories, each colonist has a floor space of about sixty feet, and the average height of these rooms is about twelve or thirteen feet. For purposes of night supervision we do not in any of the homes have a nurse or attendant on regular night duty. Our plan is to have, in each home a room so placed that from it the two (or three) dormitories in which the colonists sleep, can be completely overlooked and directly entered; and in this room sleeps an attendant or nurse of the same sex as the colonists. On the occurrence of a fit, he or she rises and attends to the patient. This system enables the attendants usually to get a good night's rest and leaves them fit for day duty, from which, however, in the case of very broken nights they are wholly or partially relieved. No accident whatever has ever resulted from the adoption of this method. Its advantages on economic grounds are obvious; but it is not for purposes of economy that the practice is followed. It is rather as a part of the general policy of the colony, which endeavors to lull the colonist into forgetfulness of his infirmities; and from this point of view it is thought best that he should not have occasion to feel himself under constant and unsleeping supervision.

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All the rooms in the various homes are heated in the manner usual in this country—by open fireplaces, which, however, for the safety of the colonists, are protected by guards formed of slender iron bars. The houses are lighted by oil lamps, an inconvenient arrangement, which we hope, when the colony has grown somewhat larger, we may be able to abandon for more modern methods. In the more recent houses we have profited in many ways by previous experience, and the arrangements of these are consequently the most complete and satisfactory. But the variation has been more often in the way of excision than of addition, and the later houses have consequently been somewhat less expensive than the earlier ones, the per capita cost of construction amounting to, as nearly as possible, $500. Furniture and equipment, a considerable part of which has been made by the colonists, have cost rather less than $100 per capita.

The water-supply and sewerage systems are extremely simple, but will be capable of adaptation at very slight expense to meet the future needs of the colony. Water, in practically unlimited quantity, is obtainable at a depth of 130 feet, to which depth a well has been sunk at a cost of $500. From this well the water is pumped direct to cisterns in the various homes and buildings, and to the gardens and farm. At a future time it will doubtless be advantageous to erect an elevated tank from which the whole colony will be supplied through the existing delivery mains. Our daily consumption is, I notice, considerably less than that of the Craig Colony, being only 30 gallons per capita. The cost of pumping and distributing is at present twelve cents per thousand gallons, but will be much less proportionately for a larger supply. The water is perfectly pure, but coming from the chalk is somewhat hard. We have, therefore, in order to obtain water more suitable for laundering purposes, recently

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constructed a covered brick reservoir to which the rain-water from the roofs of the various buildings is conducted through earthenware pipes. From the reservoir this water is pumped to the laundry. The cost of the whole work, executed largely by the colonists, was about $2,000, which will in a few years be reimbursed by the saving in labor and laundering materials, as well as in wear and tear of the clothes in the process of washing.

In regard to the sewage, it was at first a matter of careful consideration whether the water or the earth system should be adopted. The former was eventually chosen, and we have seen no occasion to regret it. The arrangement of the sewerage was suggested by the conformation of the land, the gradients being such that, without any deep excavation, a main sewer was constructed, which discharges into a conveniently situated underground tank. Thence the sewage is pumped daily to a distant point of the farm, where it is utilized upon the land in its crude state without any previous treatment. Used over a sufficient area, it is found to cause no unpleasantness whatever, while for farming purposes, especially for mangolds and other roots, it is of considerable value. The pumping of the water from the well and the rain-water from the reservoir, as well as of the sewage, is performed at present by two small oil engines of two-horse power each. These will be adequate for the needs of the colony for some time to come; in fact, until electricity is adopted to supply light and power, when, of course, a far more powerful engine will be required.

The kindly and (if I may say so) fraternal interest which I feel that you take in our little community, has led me to enter into these small details, from which I now pass to matters of greater importance connected with the mode of admission, the principles of management and general nature of the life at the colony.

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Every application for admission is carefully considered by the Case Committee; medical and other evidence as to the condition and characteristics of the candidate is collected, and before final acceptance the patient is examined, if resident in or near London, by the members of the Hon. Medical Committee, or, if resident elsewhere, by a doctor in the district nominated by the Medical Committee. Imbeciles, dements, maniacal patients and confirmed inebriates are ineligible. At the outset a pamphlet concerning the Society is sent to the friends of the candidate. In this pamphlet is a description of the cases that are eligible and ineligible, details of the principles of payment and all other necessary information. Notwithstanding all precautions, ineligible cases sometimes secure admission, owing mainly to the misguided zeal of friends, who sometimes seek rather to make out the best case for the patient than to give accurate information to the Committee and the physicians. All cases are, however, considered as being strictly on probation during the first month of residence, and if then found to be clearly unsuitable they are discharged. But many patients who seem at first hopelessly ineligible owe their condition rather to the unfavorable surroundings of their previous life than to natural deficiency; and in these cases improvement is often so rapid that, at the end of the month's probation, there is seen to be every hope that they may become suitable colonists. Many of our patients are received from London; almost all are from within the four quarters of the United Kingdom—England, Wales, Scotland and Ireland. But there are some exceptions; one of the present colonists is from South Africa, another is now on his way to us from India, and we have lately received applications even from far Australia. Unhappily, our accommodation is all too small for the need, and every candidate has to wait an inordinate time for admission, so that

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often in the interval the mind deteriorates and the disease becomes hopelessly aggravated.

It was originally in the contemplation of the committee to provide three classes of accommodation at varying rates of payment, but the needs of the poorer classes have been felt to be so great that the efforts of the Society have not as yet extended beyond the one class, which, however, in anticipation of the original scheme being carried out, is described as the third class. If accommodation for first- and second-class patients is eventually provided, it will, I think, be found that the differences in the treatment will be very limited and confined almost entirely to the interior of the homes. Outside, in the workshops, the recreation grounds, and other common meeting places, differential treatment would be, I fear, wholly detrimental to the welfare of the community. Not a few persons belonging to the somewhat higher strata of society, such as the professional and mercantile classes, gladly avail themselves of the present accommodation and share the lot of the poorer colonists; and to my mind this intermingling of classes, and the pervading sentiment of fellowship and brotherhood between them, is one of the most pleasing features of our community. In drafting one of the earlier reports of the Society, I remember using the expression: "We seek in our little world at Chalfont St. Peter to imitate the great world outside;" but I have sometimes since felt inclined rather to believe that there are some points in which our poor afflicted people "go one better" than the outside world, and set a lofty example for its imitation.

For the maintenance of each patient (subject to certain exceptions) a charge of two and a half dollars a week is made. In many cases the parents or relatives are able to pay this amount. If not, charitable people interested in the particular case often willingly take the burden upon themselves.

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Failing this, the candidate is advised to apply to the poor-law authorities of his district, it being within their power to pay the cost out of the poor-rates. A very large proportion of the colonists are provided for in this way. Indeed, in the towns the Poor Law Guardians seldom refuse such applications, if satisfied that the burden is one which the near relatives are unable to bear. In the country unions there is greater difficulty, both because the revenue at their disposal is smaller, and because, in some instances, the guardians in country districts take, perhaps, a less enlightened view of their obligations. On the whole, it must be confessed that, in order to render our poor-law system a really effective agency for dealing with the afflicted classes, much reform is needed.

I mentioned that the rule as to payment was subject to some exceptions. Cases sometimes occur in which no sufficient sources of payment are available, and in which it is not thought right to refer the applicant to the poor-law. By means of certain funds, specially given for this purpose, the Society is enabled to deal with these cases, and to receive the patient free or at a reduced rate, according to circumstances. But these special funds are used somewhat sparingly, for we adhere rather to the view that the responsibility for the provision and administration of monetary relief should be local rather than general. As a national charity, the Society provides the establishment, but it looks to the localities to furnish the bulk, at any rate, of the cost of maintenance.

The persons responsible for the maintenance payments are expected, as a rule, to provide suitable clothing; but in necessitous cases they are often relieved of this burden, the Society itself undertaking the responsibility, in which it is aided largely by gifts of clothing received from many kind friends of the colony.

In regard to the use of drugs, the highly distinguished

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physicians constituting our Medical Staff are, I believe, of opinion that the balance of advantage lies, as a rule, on the side of a somewhat constant adherence to the use of bromides, and in this they are, in a measure, supported by the practice of the German colonies and institutions. Except on rare occasions, however, no greater daily amount than half a drachm is given to any patient at Chalfont. On the other hand, there is a tendency, I think, amongst the equally distinguished physicians responsible for the medical treatment of epileptics in American colonies, to rely rather upon the health-giving conditions of colony life, than upon the application of these drugs. It is obviously not open to one destitute, like myself, of medical knowledge, to venture an opinion on so debatable a point; but without putting forward any opinion or hazarding even a conjecture, it is perhaps permissible, considering the undoubtedly deleterious effects of bromide, to express an earnest sympathy with the aspirations of those who hold that, as the conditions of colony life become perfected, it may be found possible more and more to rely upon these conditions as constituting in themselves the most potent, and at the same time, the most harmless of therapeutic agents.

Passing from the question of drugs to the kindred subject of diet, I think one again finds some difference in the attitude of the medical authorities in the two countries, though in this case the positions are, in a sense, reversed. For your physicians hold, I think, more rigorous views on this point than ours, the tendency in this country being rather to the view that the active occupation and healthful surroundings of the colonist's life enable him, within the limits of reason and moderation, to dispense with restrictions, and to partake of a dietary not very different from that of ordinary people of simple habits. Even pork and veal are occasionally admitted. Intoxicants, however, of all kinds are rigorously

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excluded except when specially ordered for purely medicinal purposes in cases of illness. The following is an average sample of a weekly dietary at the colony:

DAY	BREAKFAST	DINNER	TEA	SUPPER
Sunday	Bread and butter, porridge, tea.	Cold roast beef, potatoes, lettuce, stewed rhubarb, blanc mange.	Bread and butter, cake, lettuce, tea.	Bread and cheese, jam, milk.
Monday	Do.	Roast mutton, potatoes, cabbage, tapioca pudding.	Bread and butter, tea.	Rice pudding, milk.
Tuesday	Do.	Roast mutton, potatoes, spinach, rice pudding.	Do.	Tapioca pudding, milk.
Wednesday	Bread and butter, porridge, bacon, tea.	Fish, potatoes, parsnips, raisin pudding.	Do.	Rice pudding, milk.
Thursday	Bread and butter, porridge, tea.	Stew, potatoes, cabbage, bread pudding.	Bread and butter, lettuce, cake, tea.	Macaroni pudding, milk.
Friday	Do.	Roast mutton, potatoes, cabbage, tapioca pudding.	Bread and butter, tea.	Rice pudding, milk.
Saturday	Do.	Roast mutton, potatoes, spinach, rice pudding.	Do.	Soup, tapioca pudding, milk.

In the matter of organization and management the Chalfont Colony is divided broadly into two departments, the head of one department being the Bailiff, and the head of the other the Matron. The farm and garden, and the various branches of mechanical work carried on by the male colonists, are under the jurisdiction of the Bailiff: everything else is under that of the Matron. It rests with the Matron to decide in doubtful cases, whether a colonist is fit to go out to work in the Bailiff's department, and in the event of his becoming

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ill during working hours, he is taken back to the homes and restored to the care of the Matron and her staff; but while he is actually at work on the farm, in the garden, or the workshops, the responsibility for his care rests entirely with the Bailiff and his assistants. Careful definition is, of course, necessary under this system to avoid confusion of responsibilities; but, with this careful definition, the system has in practice been found to work admirably. It may at first sight seem an anomaly to have two heads instead of one; but after all, is it not the object of the colony system to imitate as far as may be the natural order of the family life? and is not the family, according to our modern conception of it, at its best and at its highest when its two heads are equal and co-ordinate, supreme in their respective domains, rather than when one is regarded as the dependent and subordinate of the other? I readily concede that the analogy is a fanciful one, and must not be pushed too far; but, at the same time, I feel very strongly indeed the importance, in the organization of a colony, of some method by which the co-operation, on really equal terms, of the two sexes shall be secured, and it seems to me that this must be to some extent a difficulty when the whole is under the headship of one resident officer, be that one man or woman. Your President, in his admirable work on the Care and Treatment of Epileptics (pp. 29 and 30) has so forcibly urged the necessity for the introduction in full measure of feminine influences into the organization and management of colonies, that I feel it is unnecessary to do more than express the most hearty concurrence in his views, with which, I am glad to say, our practice from the first has entirely conformed.

In our system, the Matron and Bailiff are both of them responsible directly to the Homes and Visiting sub-Committee and the Executive Committee, and it is, I think, obvious that

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such a system would be workable only under the condition of having a really effective committee able and willing to devote time and energy to keeping in close touch with the work of the colony. Fortunately, owing to our proximity to London, we have this advantage. Amongst the members of the committee are many possessed of special knowledge of various kinds, useful in the administration of the colony, and we are especially fortunate in having the services of an invaluable chairman who devotes a very considerable part of his time to his work.

The present number of homes, you will recollect, is six—four for male colonists, and two for those of the other sex. Under the Matron is a staff consisting of a Sister for each home, a male attendant for each of the men's homes, and a nurse for each of the women's homes, with one extra male attendant and one extra nurse to give relief to the ordinary staff in the various houses, and to do duty in any special emergency. The Matron herself, pending the construction of the Administration Building, lives in one of the homes, and in that home performs the duties of sister. Thus, besides the Matron there are altogether five sisters, three nurses and five male attendants. There is a male cook at the central kitchen, who is assisted by male colonists. In the Matron's house is one hired servant; in the other homes the whole of the domestic work is done by the colonists in turn. On the whole, the staff is perhaps a small one, but it is, I believe, fully sufficient, and its work is greatly lightened by the extreme helpfulness of the colonists to one another, a quality which we think is most beneficial to them to stimulate and encourage.

In the selection of cases, we are much hampered by the newness of the work, which throws upon us the arrears, so to speak, arising out of past indifference and neglect. Many cases now hopelessly confirmed and chronic might years ago

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have been amongst the most hopeful, but there was then, alas! no colony to receive them. Their pitiable condition often precludes the possibility of rejecting their appeals, though unhappily their admission involves the weary postponement of the more recent and still hopeful cases, and leads to a congestion which can only be gradually relieved by the future expansion of colony accommodation. You also, I believe, have felt the evil effects of a somewhat similar state of things, though, I trust, in a less degree, in proportion as your colonies and institutions are more numerous and their accommodation larger than ours.

From another limitation under which we labor you are happily free. It had been our confident hope from the very commencement of the Society that the most fruitful branch of our work would be the care and education of young children. In common with the London and other School Boards, we long urged upon the Government the importance of introducing legislation for the purpose of giving to the educational authorities the necessary powers in this matter, to enable them, either themselves to undertake the institutional care of epileptic children, or to bear the cost, wholly or partially, of the performance of this duty by voluntary charities such as our own Society. In anticipation of such legislation the Milton and Pearman Houses were built for the reception of epileptic children; and in accordance with our expectations, at about the time when these buildings were completed an Act of Parliament was duly passed for the purpose in view. Unhappily, however, owing to the unfamiliarity of the legislature with the needs of these afflicted children, a clause was inserted, during the somewhat hurried passage of the bill through the House of Commons, containing conditions, applicable enough to certain classes of children, but wholly inconsistent with the needs of epileptics. Under these con-

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ditions no establishment for epileptic children can be certified by the Board of Education for the purposes of the Act if it consists of more than four homes, or if it receives more than fifteen children in any one of the homes.

So strong is the feeling against these limitations, of which the former especially is obviously repugnant to the principles of the colony system, that it has been felt necessary to postpone the reception of young children until these conditions are repealed. This view coincides with that taken by the School Board authorities throughout the country; and as a result, not a single certified home for epileptic children has been established. The ultimate repeal of the clause may be regarded as certain, but unfortunately legislation on minor matters is with us a slow and tedious process, and we may have long to wait. In the meantime, the Pearman and Milton Houses have been devoted, as you will have seen, to the reception of adults; and at present we receive no children at the colony of a less age than, in the case of boys, about fourteen, and in the case of girls, about sixteen. For the younger colonists, concurrently with industrial employment, we provide a certain amount of instruction in ordinary elementary subjects, but no effective educational organization can be introduced until we are able to receive children generally.

In the management of the colony we think it scarcely desirable to have a code of hard and fast rules, for the peculiar nervous temperament of epileptics leads them in many cases, we rather think, to *desire* that which is *forbidden*, and renders them more amenable to a request than to a command. In the pamphlet, however, to which I have previously referred, is a section descriptive of the "Life at the Colony," which candidates as well as their friends are particularly requested to read before making application. This section is in reality

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GREENE HOME.

MILTON HOUSE.

PEARMAN HOUSE.

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a substitute for a code of rules, bringing, as it does, to the notice of the would-be colonist, in a simple form, free from the intrusion of the imperative mood, some idea of his future life at the colony, and of the course of conduct to which it is anticipated he will aspire to conform. This section of the pamphlet is detachable from the rest, being intended to be kept by the colonist for his guidance.

The atmosphere of an epileptic colony should be redolent of freedom, and we are disposed, therefore, to regard with complacency the state of the law in this country which precludes the possibility of any epileptic being detained at Chalfont against his own free will. This rule would, of course, be subject to exception in the case of a colonist attempting to leave while in a state of temporary mental derangement such as to render him irresponsible for his actions. Fortunately, however, so exceptional a case has but once arisen in our experience at Chalfont. The question of the compulsory segregation and detention of epileptics and other degenerates is doubtless of great importance. It is a question which, in its broad aspect as a matter of public policy, has been more fully considered in your country than in ours; and I trust you will believe that any observations I may venture to make on this subject are offered with becoming diffidence. They are, indeed, rather the inquiries of a student and seeker for the truth, than the categorical statements of one who professes to be able to point to a right conclusion. But may I say that this question has, it would seem to me, two aspects, which are, I think, not always regarded separately.

Epileptics and other mental and physical degenerates often, but not always, become habitual dependents upon the community; while on the other hand, among the habitual dependents are many who are not in the ordinary sense degenerates; and in the discussion of the question of compulsory segregation

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it is not always, perhaps, made clear whether it is proposed to apply these measures to certain classes in virtue of their being degenerates or in virtue of their being dependents. That the community is justified in controlling, as it thinks best, the lives of those permanently dependent upon its bounty would seem indisputable. But when we consider the matter in its other aspect, we seem to be confronted with far greater difficulties. The forms of mental and physical degeneracy are so numerous in kind, and so indefinable in degree, that if the principle of compulsory dealing with degenerates, *as such*, be once adopted, it would seem hard to say to what lengths it may not logically be carried, and if the *formulation* of legislation on such a subject be difficult, might not its *administration*, dealing, as it would have to do, with matters of opinion and speculation rather than of ascertainable fact, be found eventually to be fraught with possibilities of widespread danger to the liberty of the community? Influenced by such considerations as these, ought we not, with strenuous effort and unwearying patience, to test all other methods and exhaust all other resources for the improvement of the race before too hastily treading the tempting but dangerous paths of compulsion?

Whatever be the true solution of this great question, I cannot but feel that if methods of enforced detention are to be applied at all, the custodial institutions should, as far as possible, be distinct from the colonies for voluntary patients, lest the oppressive feeling of restraint should rest upon all alike; lest the presence of the habitually disaffected should react unfavorably upon the minds of their contented associates; and above all, lest gradually the nurses and attendants should become habituated to the notion of compulsory treatment, and should fall somewhat from the high ideals in which the true essence of the colony system is to be found.

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We have no resident physician at the colony; but Dr. Brooks, who practices in the neighborhood, visits the colony twice a week regularly, and at other times whenever his services are required. Dr. Aldren Turner, a member of the Hon. Medical Staff visits once a month, and the other members of the Medical Staff occasionally. The energies of our Hon. Dental Surgeon, Mr. Lawson Dodd, are very severely taxed. His visits are frequent and of long duration, for it is found that most of the colonists come to us with their teeth in a very bad condition.

The Matron is a trained hospital nurse, as also are most, but not all, of the Sisters. For the nurses and attendants previous training is not thought desirable, it being considered best to train them at the colony. In the selection of candidates for the various posts, intelligence and the necessary qualities of character are considered all important, and by extending the field of selection to the untrained it is obviously easier to secure those possessing these attributes. Usually our best male attendants are men who have lately left the army. The senior amongst them is a man of superior position, the son of a distinguished general. Keenly interested in the work, he is happy to give to the Society services of great value in return for a salary little more than nominal.

It would, I believe, be difficult to find a staff surpassing in devotion that which we are fortunate enough to possess at the present time; and the credit for this belongs largely to our Matron, Miss Aimee Robinson, who exhibits a truly remarkable faculty for influencing her associates, bringing out all that is best in them, and inspiring them with the zeal and enthusiasm which burn in her own heart, though rarely seen on the surface. Her gifts are those of nature rather than of training. They defy analysis; but among them is one quality in particular to which I can definitely point as perhaps almost

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the chief source of her great influence. Staff and colonists are alike devoted to her because she never takes credit to herself, but gives it all to her associates; and I think I am speaking without exaggeration when I say that I have only once heard her confess that she herself plays any definite part in the working of the colony machinery—and on that occasion she merely remarked, "Well, perhaps, I sometimes oil the wheels."

The industrial organization of the colony does not at present include so large a variety of occupations as will be possible and desirable when the number of colonists has increased. So far, however, as it extends it is admirably managed by the Bailiff, Mr. Sills, a man of varied experience. A farmer's son, brought up upon the land, he afterwards became a builder, and in England and Canada acquired ample knowledge of all the various trades comprised in the builder's art. Then, for reasons of health and inclination he settled down again to his old pursuit of farming. He was tenant of Skippings Farm when we came into possession of it, and we thus had the singular good fortune to find upon the spot the very man for the purpose. He is also full of enthusiasm, combined with tact, kindliness and discretion in the handling of his men, both colonists and paid workers. He is assisted by a gardener, a carpenter, a smith, a basket-maker, and a few others who work with the colonists in their various departments. In the choice of these assistants also character is the first consideration. The trades at present carried on by the men are farming, gardening, carpentering, smith's work, plumbing, painting and basket-making. A few of the male colonists are engaged in the tailoring and shoemaking trades, but at present only to the extent of repairing clothes and boots for their fellow colonists.

The work of the women consists chiefly of laundering, housework, and needlework.

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The test of the industrial improvement of the colonists consists we think in the development of willingness and ability to work without constant supervision; and in this respect great strides have been made. A large part of the work on the farm and other departments is done by the colonists unaided and only occasionally supervised; on one occasion the laundry was carried on for some weeks by the unassisted efforts of the women colonists in the absence of the usual directress of these operations. Their ability to stand this test was the best evidence of the efficacy of the training she had given them; and, indeed, the laundry is perhaps in some respects the most successful of all the industrial departments. I believe the annual value of the work done in it by the colonists falls little short of fifty dollars per capita. About twenty women are thus employed.

Athletic sports, games and recreations of all kinds are enjoyed by the male colonists, and in these they are greatly encouraged by the attendants. Football and cricket matches are played by our epileptic patients against teams from the neighboring villages, and in this friendly rivalry the colonists come out victors quite as often as their opponents. The women patients are extremely fond of dancing, but in other respects are, perhaps, not as yet quite so given to active exercises as the men. There is, however, a tendency to increased interest in this direction. Lawn tennis is played by them and also croquet, bowls, and other games. Their occupations being largely sedentary, we feel it even more important in their case than in that of the men that the hours of recreation should be spent as far as possible in outdoor exercises. The indoor pastimes of the men and women include cards, chess, draughts, and many other games. Bagatelle is also played. Almost all the colonists take a great delight in music and singing. Many of them are good performers.

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Concerts and entertainments are held weekly or oftener in the recreation hall; the performances being sometimes given entirely by the colonists and staff, sometimes wholly or partly by outside friends from London or the neighborhood.

As a result of the colony treatment, not a few of our patients have been enabled to resume their places in the outside world—cured, if one may ever with any confidence use that expression of the victims of this dire disease—or, at any rate, free for the present, from its onsets and able to support themselves by their own exertions. At Chalfont, as elsewhere, the younger the colonist, the greater we find is the prospect of full success; indeed, this has been the case to an extent even beyond our expectations, and one can but chafe sometimes at the thought of the excluded children and of hopes deferred through the error of our misguided legislators.

Our little hospital, known as the Dearmer Home, was completed, as previously mentioned, in 1899, but has not yet been opened. The reason of this is that illness has happily been so rare that this building, if opened, would be almost invariably empty; and we do not anticipate that it will be expedient to maintain the requisite staff in this home until young children are received, when doubtless infirmary accommodation would be more often needed, or until the colony as a whole has very largely increased. At present the rare cases of illness requiring special care and nursing can be better and more economically treated in the sick-rooms of the various houses.

We have also happily been wonderfully free from serious accidents, though this freedom has not been purchased by excessive supervision or undue caution. Indeed, paradoxical though it may seem, I would venture to attribute this immunity rather to the opposite cause. In an epileptic colony, as in the outside world, "the flower safety" is often to be plucked

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only "from the nettle danger." Even among these afflicted people the twin virtues of manliness and helpfulness of others will be found in the long run the best safeguards of the community; but these qualities are acquired only by practice and exercise, and it is I think the wiser policy to permit and even to encourage the colonists, both in their work and their play, to run all reasonable risks. The apprehensions of over-anxious parents are often difficult to allay, but as our homely proverb says, "the proof of the pudding is in the eating," and during the whole period of the colony's existence I can remember only one accident of a really dangerous kind.

The total number of deaths from the commencement has been three, of which one occurred in 1895 and two in 1897. No death has occurred during the last three and a half years. But it is in a sense only right to debit the colony with another death, though it did not actually occur there. In the case of a consumptive woman patient, the tubercular mischief became so aggravated that it was thought there might be danger to her fellow colonists, and she was therefore transferred to a suitable nursing home, where she a few months afterwards died. Doubtless she would have died at Chalfont had she remained, and as a larger and more complete colony than ours would probably have proper provision for the care and isolation of consumptive patients, it would seem that for purposes of comparison we ought to add this to the list of deaths, which then becomes four.

The cost of maintenance is an important question. In dealing with it I propose to deduct from the total expenditure the amount returned in the form of profits on the various industries. These profits are due to the labors of the colonists, and this method of calculation is therefore obviously only just and fair to them. The figures I am about to give you will show how greatly the increase in number has led to

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decrease in per capita cost. I should mention that in no case are the expenses connected purely with our London office included in the figures given below. In 1895, the first complete year of the colony's existence, with an average of 24 colonists the weekly per capita cost exceeded four and a half dollars; in the next year, with an average of 36 it was over four dollars; while last year, when the average was 110, the cost for the first time fell to just below two and a half dollars a week. Much of this improvement results of course from the mere increase in numbers, but much also is due to the improved industrial organization and ever increasing efficiency of the colonists.

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THE CARE OF EPILEPTICS AND THE OUTLOOK IN THE BRITISH ISLES.

BY WILLIAM ALDREN TURNER, M. D.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON; ASSISTANT PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYZED AND EPILEPTIC AND TO KING'S COLLEGE HOSPITAL, AND VISITING PHYSICIAN TO THE COLONY FOR EPILEPTICS, CHALFONT, BUCKS, ENGLAND.

It is necessary at the outset to maintain that the general principle guiding the formation of colonies for epileptics should be the care, management, and treatment of the sane as contrasted with the insane epileptic, for whom provision is already made in the lunatic asylums. But it is well known that, owing to the close relationship between epilepsy, idiocy, and imbecility in early life, and with dementia in the later years of an epileptic's existence, it is not always possible to draw this strict line of demarcation. There are, however, numerous epileptics, seen chiefly in the out-patient rooms of the hospitals and in the wards of the poor-law infirmaries, who, if suitable opportunities were afforded them, would be capable of contributing to their maintenance by doing a considerable amount of work. On the other hand, owing to deficient education and training in childhood and youth, or to inability to obtain regular employment on account of fits, or to the fact that he is excluded from many sources of employment, such as building, engineering, railway work, and the like, the services of the epileptic artisan are not sought after by the employer of labor. Hence, not only amongst

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the working classes, but also amongst those in easier circumstances, the epileptic is found to be a burden to his relatives.

In consideration of such facts as these, quite apart from statistical evidence that epilepsy is a common malady, attempts are being made by various institutions, charitable and other, both in this country, on the continent of Europe, and in the United States, to do something to assist this sorely afflicted class. The problem of their care is in process of solution, as is illustrated by the enormous and rapid growth of the colony system. Into these institutions are taken epileptic children, with the view of affording them an education suitable to the peculiarities of their affliction, and epileptic youths and adults are received, with the object of providing them with employment of a kind especially favorable to their disease, while it is also hoped to ward off or delay the downward tendency toward dementia, which is characteristic of most cases of severe and confirmed epilepsy. The sane epileptic amongst the poorer classes of the community occupies a difficult position under conditions of ordinary sickness. Should he fall ill, his presence as a patient in a general hospital is regarded with alarm, and during convalescence he is debarred from admission to the numerous Convalescent Homes on account of fits. It would therefore appear to be an important step on the part of the management of colonies to provide houses into which epileptics, convalescent either from ordinary acute illness or from the immediate effects of their peculiar malady, might be temporarily admitted.

As is customary in England, treatment and care of the sick poor is largely a matter for private benevolence, and thus far the sane epileptic has been regarded merely as a sick person and treated in a manner similar to persons suffering from ordinary bodily disease. In addition to the large general hospitals and dispensaries, there are three special hospitals in

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London for the treatment of epilepsy; but until a few years ago no method of dealing with the victims of confirmed epilepsy upon other than medicinal and hospital lines existed in the United Kingdom. In this respect the confirmed epileptic was in an unfortunate condition compared with the insane, the blind, deaf-mutes, feeble-minded and defective children, and paupers. The epileptic was in this predicament: unless he developed insanity, or was from the outset feeble-minded or defective or became a pauper, neither charity nor the State made any provision for his maintenance, notwithstanding the fact that from the nature of his disease he was unable to maintain himself.

During the past decade, however, much and increasing interest has been awakened over the unfortunate condition of the epileptic. In Germany it has been recognized since 1867 (in which year the celebrated colony at Bielefeld was established) that epileptic persons might be usefully and industriously employed with benefit to their health and with satisfactory financial results. That this matter is arousing considerable general interest may be gauged from the recent publication of the large work by Letchworth—"Care and Treatment of Epileptics" (New York, 1900), —the whole of which is given over to a detailed account of the epileptic institutions of the United States and of some others in this country and abroad and the principles underlying their foundation.

Plan of an Epileptic Colony.

Before proceeding to describe the various colonies for epileptics already existing in this country, it may be necessary to state very briefly the plan upon which a properly designed colony should be based. It should consist of various departments, each under the supervision of a competent head, the

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whole administration and control being under the care of a fully qualified medical man; for not only have the inmates to be governed and educated and have work apportioned to them according to their mental and physical abilities, but they are sufferers from a disease having special peculiarities and characteristics, which it is the business of a medical man to study and control.

A colony should consist of:

1. Residential buildings of the villa type, each to hold from 18 to 24 or 30 inmates. Each building should be complete in itself in so far as domestic and sanitary matters are concerned. In charge of each should be a competent sister, who is also housekeeper. The houses for the males should be entirely distinct from those for the females, and preferably at some distance apart. As the colony grows in magnitude additional villas may from time to time be added. The arrangement of the villas, either in the form of a street or other method, must of necessity depend upon various considerations, such as the value of the land, the nature and fall of the ground, so as to permit of effective drainage, and so on.

2. A farm, market-garden, farm buildings, the Bailiff's house, etc. There is no form of outdoor work upon a farm or market-garden from which an epileptic may be debarred.

3. Workshops, such as carpenter's, boot-maker's, tailor's, laundry, smithy, etc.

4. The schools, which should be either attached to the residences of the children or in very close proximity to them.

5. The hospital. This is a necessary element of an epileptic colony. Many able-bodied epileptics become patients for short periods after severe attacks, and require in some cases careful nursing and attention and in others restraint. Hence the possession of a padded room is an important feature of the hospital arrangements.

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6. An infirmary for the old and demented. It would appear that this becomes a necessity in a colony as time goes on. Those in England have not been sufficiently long established for this necessity to have arisen, but in the older colonies on the European continent it has been found beneficial to transfer the aged and infirm to such a building rather than to an asylum.

7. The administrative department, consisting of the residences of the superintendent and matron and the general offices and other necessary departments.

8. A convalescent home. As already elsewhere explained, many epileptics are debarred from admission to ordinary epileptic homes. It has therefore been suggested that a house for this purpose might form a useful adjunct to an epileptic colony. Such a house, to contain twenty-four male epileptics, is now in course of construction at the Chalfont Colony.

The Financing of an Epileptic Colony.

There are several ways by which money may be raised to originate, support, and maintain these institutions. So far, in England, the State has rendered little, if any, assistance; hence money has been sought for either through generous donors or from charitable contributions.

1. The first place is given to private benevolence. Although money may be obtained from the sources to be immediately mentioned, it is necessary that this should form an important element in the financing of a young and developing colony.

2. By payments from the School Board authorities. As the education of epileptic children is as much a matter for the educational authorities as that of normal individuals, the funds for this purpose may be legitimately provided by the School Boards. In the majority of cases it is advisable that

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epileptic children should be educated apart from the non-epileptic, and it is strongly advocated that the schooling of epileptic children should be carried out in colonies for epileptics. A recent Act of Parliament, the Elementary Education (Defective and Epileptic Children) Act, 1899, authorizes the School Board authorities to contribute, under certain conditions, toward the funds of voluntary institutions, such as the existing colonies, in order to permit them to carry out the education of epileptic children.

3. By payments from public authorities. Owing to the detention in workhouse infirmaries of numbers of epileptics, many of whom are sane, able bodied, and capable of work under direction, the Poor Law Guardians should have the power to pay for and maintain such persons in epileptic colonies, where their services may be usefully employed and their disease treated upon scientific lines, so that they may be placed under the most favorable conditions for the arrest or amelioration of their disease. As a matter of much importance, it should also be in the power of Boards of Guardians to assist relatives to maintain an epileptic member of their family at one of the colonies without at the same time pauperizing such individuals. It is also contended that it should be in the power of the County Councils to contribute toward the cost of establishing and assisting colonies conducted upon voluntary principles, as it has been shown that the per capita cost is considerably less in those institutions conducted along charitable lines.

4. By payments from colonists. This is an important item and a necessary one in the early stages of an unendowed colony. In some instances three grades of colonists are admitted. The first, a highly contributing class, pay sufficient to cover their own expenses as well as to assist those of the third class, who are most likely unable to meet the full outlay

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required for their keep. The second, or intermediate class, merely cover their expenses by their payments. In course of time the industrial, or farming portions, ought, under judicious care and management, to cover their own expenses, and perhaps afford a balance of profit; but in a colony in full working order, with the necessary superintendent, heads of departments, instructors, nurses, attendants, and servants, it is scarcely likely that the whole can be maintained without financial assistance from outside.

The general conclusion at which one would arrive after full consideration of all the means of financially establishing and promoting institutions such as epileptic colonies would be, that they should be maintained by a combination of private benevolence with grants in aid from the public and educational authorities.

Epileptic Colonies at Present Existent in England.

1. The Maghull Home for Epileptics, near Liverpool, was founded in 1888. This is a home whose chief object is the employment of adult epileptics, both males and females. The present number of inmates is about 130. The method of housing the inmates employed in this institution differs from that of other colonies in that there are two large houses, one containing men and the other women, instead of the usual villa residences.

2. The Meath Home, near Godalming, Surrey, was founded in 1892. Only female epileptics are admitted to this home, which is capable of giving residence to about 80 epileptics. There are two classes of patients, the first who pay from one to two guineas a week, and the second who pay at the rate of 12s. 6d. a week.

3. The National Society for Employment of Epileptics,

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whose colony is situated at Chalfont St. Peter, Buckinghamshire, twenty-one miles to the west of London.

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The arrangement of the houses is simple and convenient for the purposes of supervision and management as well as for effective drainage, the villas being built upon either side of an avenue which forms the arc of a circle, the ground falling gently toward the center. Lying immediately outside this street are the kitchen, the recreation-room, the laundry, and the workshops. The home for convalescents is being erected at one of the gates, while at the other an administrative building is being put up.

The foregoing is a brief description of the existing colonies for epileptics in England, but another large colony is in course of construction in the north. The following short account of the proposed colony at Chelford, Cheshire, is taken from a Manchester daily journal:

"Provision is to be made at first for 200 patients; and already from Great Britain and Ireland more than that number of applications have been received. There is sufficient margin of land for considerable enlargements of the accommodation as these become necessary. The plans (and, indeed, the walls which have begun to rise above the surface of the ground) show an extensive set of buildings. A drive from the entrance gates will lead first to the administrative block, which will stand at one end of an oval enclosure. Within the oval the next building beyond the administrative block will be a recreation hall and chapel; then will come two observation wards, where new patients will remain for one month, also the infirmary and yet farther within the oval, though perhaps the most central building in the colony, will be the central kitchen. The living houses are to be outside the oval, those on one side for the men and those on the other for the

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women, and there are to be orchards and gardens between these houses and the buildings which have been named. There will be a playground and school for children, and workshops, laundry, and machine-rooms for the adults.

The intention is that the patients shall be given useful and healthy occupation in the open air, in order that they may feel that they are producing something, and it is probable that some scale of payment will be allowed them. Their market-garden produce will be sent to the nearest towns to be sold, and they will be taught trades and crafts which they will find useful to them when they have left the colony. Most of the patients will pay according to the class in which they elect to be placed; but, though the colony is in no way intended for epileptics who in the ordinary course would come under the Poor-Law, certain provision will be made for cases in which payment is impossible."

The Education of Epileptic Children.

For the proper education of epileptic children it is advisable to separate those who are sane from the imbecile and idiotic. For the management of the latter, provision has already been made throughout the country in idiot asylums or in homes specially adapted for the purpose. The experience of the authorities of such institutions shows that much benefit may accrue to epileptic children, sometimes to a remarkable extent, when placed under careful supervision as to food, exercise, regularity in habits, proper instruction, and judicious employment.

It is difficult to obtain any trustworthy statistics upon the actual number of sane epileptic children in London, but a report of the Charity Organization Society throws some light upon this subject. Of 372 children exempted from attendance at the elementary schools in London in 1891, 61 were

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stated to be epileptic. In the year 1896 there were 485 sane epileptic children known to the London School Board authorities, 226 of whom were not under instruction.

Dr. Shuttleworth, the special medical officer of the London School Board, whose experience in this matter is very large, informs me that he has examined 416 epileptic children specially referred to him by the authorities. About half of these he believes require special instruction in schools other than those used for the healthy children.

It is important to ascertain what circumstances would lead to the separation, for educational purposes, of epileptic from healthy children. Although many of the former are bright and ready to acquire knowledge, the minds of a large number have even at an early age suffered from the blighting influence of their disease. Looked at from the medical aspect, the following suggestions may be made:

1. That, where possible and when there is no blunting of the intellect, or when the fits occur only at night or at long intervals, epileptics may be educated along with healthy children.

2. If there is any marked impairment of intellect, and the fits are frequent or severe, or special supervision is necessary, the epileptics should be educated separately from other children.

3. That, if along with epilepsy there is feeble-mindedness, but without actual idiocy or imbecility, provision for the suitable education of such cases should be made.

It would seem as if the epileptic colonies afforded the most suitable means of providing that form of education most suitable to a young epileptic. Provision should therefore be made in all colonies for the education of epileptic children.

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Influence of the Colony System upon the Sane Epileptic.

The chief point to be borne in mind in all matters appertaining to the care and management of the confirmed epileptic is, that medicinal treatment forms only a small part of the requirements of each case.

Increased experience favors the view that the early treatment of epilepsy ought to be institutional in its methods. It will be presently shown how valuable this system may be in the case of young adults received into a colony within a short period after the onset of the seizures.

The principles which guide the care and treatment of epileptics in a colony are:

1. The removal of the person from town or city environment, including his removal from the sometimes unsatisfactory influence of the domestic circle.
2. Regular and congenial employment in gardens, fields, orchards, or workshops, under the supervision of capable persons.
3. A well-ordered and regular mode of life, with avoidance of excitement and abstinence from alcoholic liquors.
4. Abundance of nourishment of a simple character.
5. The reduction of medicinal remedies to a minimum amount.

The effect of the practical application of these principles upon the number and severity of the seizures and upon the general and mental condition is marked. Frequency of the fits is usually considerably diminished for a period after admission—a change which may be ascribed to the effects of the improved hygienic surroundings.

In a minority of cases there is a temporary increase of frequency of seizures, probably due to a diminution of the

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potassium bromide with which many are saturated on arrival. Of those who have been in the colony for a long time it may be said that they maintain a surprisingly constant average both in the frequency and severity of their seizures. In a very small minority there is a steady downward tendency toward dementia, apparently the natural course of the disease in these cases, as it was associated with increased frequency and severity of the fits. In the majority of cases no such mental deterioration has been observed. Many of the colonists are capable of work requiring individual alertness and tact, while most are able to do good work under supervision. It is scarcely necessary to do more than mention that under the influence of good food, regular meals, hygienic and improved surroundings, the general physical state undergoes material improvement.

But the colony system is of immense general value, for it offers the means of employment to a class of the community who have difficulty in finding work on account of their malady. It provides that kind of occupation which is most suitable for the nervous condition associated with this disease, as the work easily performed is scheduled and under direct supervision. The least active or alert have a fair chance of success, and perhaps of most value is the general salutary influence of the system upon the individual colonist. If interest is taken in his work, in his mode of life, and in his amusements, even a confirmed epileptic is capable of becoming a useful person.

It may be fairly claimed for the colony system that it provides the most satisfactory means of dealing with epileptics, both in the earlier stages of the disease and when it has become confirmed. The effect of removing the young epileptic temporarily from the ordinary occupations of life and placing him under the influence of the colony system would seem to be productive of much good toward the amelioration of his con-

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dition. Our experience at the Chalfont Colony in this connection has not been sufficiently extensive to permit of definite statements being made, but our observations would point to highly satisfactory results as likely to accrue from this method. Should this be borne out by their experience, the colony system will come to afford the most complete and trustworthy means of treating epilepsy.

A brief reference may here be made to the influence of the different kinds of employment upon the frequency of the epileptic seizures. It would appear as if the most satisfactory form of work was constant employment in the open air. The greatest frequency of fits seems to occur among those who are confined to sedentary occupations, such as boot-making and basket-making. Those who have to do indoor work are usually put for half a day upon some outdoor occupation. Laundry work seems to agree well with the female epileptics.

It has been found advisable to provide ample amusement during the winter months. It is rare to have fits occurring when all the colonists are gathered together for an evening's entertainment—a fact which contrasts favorably with the numerous seizures which occur each evening under ordinary domestic conditions.

Selection of Cases.

It has been found advisable under the existing conditions of management and direction of the Chalfont Colony to carefully select the colonists from amongst a large number of applicants. The points to which attention is specially directed by the Medical Committee in this matter are: Has the epileptic been unable to obtain employment, or has he been discharged from one or more situations by reason of his fits? Is he capable of work under direction? It has been found necessary to regard as ineligible those who from physica

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causes are not strong enough to undertake some kind of active work; those who from habitual irritability of temper and eccentricity of disposition would not live in harmony with their fellow-inmates or be amenable to the rules and regulations of the institution; and especially those who are imbecile, demented, or liable to dangerous impulses. Mere frequency or severity of the fits, however, does not disqualify the applicant, provided the mental condition is satisfactory.

A large number of the cases applying for admission to the colony are paupers. These may be subdivided into two classes; those on the one hand whose period of detention in the workhouse has been of short duration, for instance, under twelve months, and those who on the other hand have been inmates for prolonged periods. It has been found that the latter class rarely prove satisfactory under the conditions of life in an epileptic colony, but the former have in many cases proved the best and most hopeful colonists. Temporary residence in the workhouse infirmary, therefore, should not debar an applicant from the benefit of the colony system. As a rule, he has been placed in the infirmary merely as a temporary expedient, owing to inability to maintain himself or the necessity of removing him from his home on account of the frequency and severity of his fits.

Conclusion.

In this brief communication, attention has been directed solely to the existing provision for the care and management of sane epileptics in the British Isles. So far, however, the attempts to follow along the lines of the great German colonies have been confined to England, no colony having yet been established in Scotland or Ireland. The outlook in the United Kingdom is distinctly encouraging, and interest has been aroused in this matter which is firmly taking root, as is

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evidenced by the formation of the National Society for Employment of Epileptics and the foundation of the large colony of the David Lewis Trust, Cheshire, which will provide more especially for the northern counties. A feature of great significance also is the awakening of the educational authorities to the needs and requirements of epileptic children. The appointment of special medical officers by the School Boards in the great centers of population, the endeavor to obtain trustworthy statistical data as to the number of epileptics requiring special care and attention, and the foundation of special schools for children afflicted with this disease,—all point to a genuine interest in the welfare of the epileptic.

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BETHEL, NEAR BIELEFELD.

[An invitation was extended to Pastor Siebold of the Bethel Colony to attend the first annual meeting of the Association and submit a paper on the great work carried on at that celebrated institution. In response Pastor Siebold expressed regret at his inability to attend the meeting and forwarded, in conjunction with Dr. Huchzermeier, the following information regarding the colony. They sent also at the same time printed documents, statistics and other valuable material relating to the colony, which may be found in the archives of the Association.—EDITOR.]

The institution for epileptics, at Bethel, near Bielefeld, was established in 1867 as an outcome of the interest manifested by the authorities of Rhineland and Westphalia in this missionary work. Commencing with four epileptics, there are now 1,722 under care. The great extent of ground, gardens, fields and woods, the various buildings scattered here and there, permit the subdividing of the unfortunates by age, physical infirmities, and mental condition. Family life rather than enclosure in institutions has been found to be the best method of treatment for this class.

Where the mentality permits, an elementary education is given. There are four classes for boys and four for girls. Adults are trained, as far as possible, in garden and field work and in handicrafts, domestic economy being made a specialty for the women. Their mental faculties are exercised so as to turn their thoughts from sickness, as such methods are fully as helpful as medicine and a physician's treatment. Amusements, festivals—patriotic and otherwise—music, panoramic exhibitions, games in the open air, excursions,—all serve to strengthen the epileptic both mentally and physically.

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The sick are divided into three classes, viz.:

Class I. 6 men, 6 women,
Class II. 63 men, 50 women,
Class III. 905 men, 737 women.

Class I. has the most expensive appointments as to rooms, etc. Class II. has all the comforts of well-to-do families. Class III. is kindly cared for, and far better than would be possible in their own homes. Medical attendance is similar in all classes.

The laws of Germany make it obligatory upon the community to see that good care is given to this class of unfortunates.

This institution has 155 male and 99 female caretakers.

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THE CARE OF EPILEPTICS IN BELGIUM.

BY JULES MOREL, M. D.,

COMMISSIONER IN LUNACY.

Charitable questions as related to the care of the insane and epileptics are not well understood in Belgium. They are always accompanied with the question of material interests, and it is this question that greatly retards progress. As many epileptics are found in the insane asylums in Belgium, and as the head physicians are almost all general practitioners, and as the assistant physicians receive very small pay and treat only bodily ailments, it follows that the alienist physicians are occupied very little with the epileptics. I venture to give you my opinion on the subject of Belgian epileptics treated in ordinary hospitals or in insane asylums.

1. I freely make the assertion that these invalids are not well cared for in these institutions. In my opinion, the disease is of sufficient importance to have special physicians attached for their care and treatment. It would be necessary, regardless of considerations to follow, that all that epileptics eat and drink be examined physiologically, that their secreta and excreta and even the fecal matter be examined, that the same studies be extended to the different conditions in which these invalids are found—repose, semi-activity, activity, inside air, outside air, etc. It is even contended that rest in bed diminishes epileptic paroxysms.

2. Negligence in school attendance has often been men-

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tioned. In my opinion, it is a question of determining the nature and prognosis of the epilepsy, and, if the disease offers no chance of cure, I would never recommend school attendance. These invalids can receive an objective education which would demand much less intellectual labor. They may be offered easy occupations requiring slight mental effort. For these two motives alone, without mentioning others, the colony is preferable for epileptics.

3. Confinement of epileptics in an asylum or hospital must, in my opinion, favor a series of immoral actions. Epileptics are more passionate and irritable than other invalids. There are some whose venereous and alcoholic cravings and whose craving for tobacco are very pronounced; and as in the greater number of the asylums and hospitals alcoholics and tobacco are not yet suppressed, the epileptics, or at least many of them, are urged to drink the same drink of their comrades as they demand tobacco to smoke or snuff. As to venereous excess, if the natural manner of sexual intercourse be not offered them, they become addicted to onanism (self masturbation or mutual masturbation), and commit venereous acts contrary to nature.

There is scarcely need of mentioning to you their degree of irritability, the different emotions of moral excitements of the daily life. Physicians of hospitals for the insane provided with epileptic quarters know how great is the impressionability of this class of invalids and how very often morality is difficult to attain. *Psychotherapie* gives rarely any results in these quarters and the *status epilepticus* reigns there permanently; that is to say, the state of moral irresponsibility reigns there permanently, and therefore the hospital force is powerless to obtain a collective submissiveness.

The aforementioned arguments should be already sufficient to show the motive of the necessity for modifying the

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ordinary procedure of hospitalization and for declaring that their colonization—their dispersion—should offer advantages infinitely superior to confinement in hospitals.

4. I have already mentioned the *status epilepticus* for the purpose of explaining the incompatibility in an assemblage of a great number of epileptics. But what a danger for the environment! What a shocking and sudden sentiment of horror the sight of a severe paroxysm inspires! Can one affirm that even in an epileptic quarter contagion remains inoperative? Can any one deny that epileptics may be thrown into convulsions by witnessing the paroxysms of other victims of the disease? In my experience I have witnessed some sad instances of this. Finally, regardless of convulsions, the *status epilepticus* often places the epileptics in continued danger—a danger which experience teaches is much the more serious when the epileptic is in the midst of others. The *status epilepticus* becomes more intense in epileptic quarters, not only by reason of numbers, but also because it is found in this combination of exciting conditions exasperating, because hallucinations, visual and auditory, find there a far larger field when they are nearly associated with ideas of persecution or vengeance. In this latter instance, epileptics are the most formidable of men, when the malady unchains its furies in the meshes of their nerve centers.

I would urge two other reasons that favor the colonization of epileptics. These invalids, distributed in small centers, would have nurses who would familiarize themselves thoroughly with the *modus fasciendi* before the paroxysm and during the *status epilepticus*; and again the hygienic and medical treatment, which will be able to mitigate the harmful effects of the conditions of violence and excitement of these paroxysms.

5. In creating workshops in the epileptic colonies, the

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former would naturally be small and proportioned to the requirements of the invalids to be accommodated. But in my opinion, it is well to remember that paroxysms are much less frequent among epileptics occupied with agricultural pursuits than with other employments, and that in every condition, the epileptic is physiologically and psychologically much happier when he finds an occupation suited to his physical energies and his intelligence.

In closing I will say that I am wholly in favor of the colonization of epileptics under the direction of intelligent physicians, who will devote themselves exclusively to the study of epilepsy.

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THE CARE AND TREATMENT OF EPILEPTICS IN SWITZERLAND.

BY F. KOLLE,
SUPERINTENDENT OF THE SWISS INSTITUTION FOR EPILEPTICS AT ZURICH;
AND
DR. TH. KOLLE,
SUPERINTENDENT OF THE SANATORIUM, "SCHLOSS PFULLINGEN" (WÜRTEMBERG).

According to the ratio now generally accepted as correct, of 1.5 epileptics to every 1,000 inhabitants, the number of this class of sufferers in Switzerland would be 4,500 among a total population of about 3,000,000.

In Switzerland at the present time there are three institutions devoted exclusively to their care as follows:

	FOUNDED IN	
Petit-Lancy (Geneva),	1884, with	26 beds.
Tschugg (Bern),	1886 "	102 "
Zurich	1886 "	150 "
In all		278 beds

In the fall of 1901 the number of beds for adult males in the Zurich institution is to be increased by 80, giving a total accommodation for 230 patients. In addition, adult male insane epileptics are provided for in the various insane asylums of the country, while quiet patients are accepted in private sanatoriums.

The three institutions above referred to are private institutions, founded by private contributions and supported partly by the same means and partly by the State. They are under State supervision. The Schweizerische Anstalt at Zurich,

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which is open to citizens of all the cantons and to all creeds, even accepting foreigners in the "first," or private-patient, class, receives annual contributions of from 50 to 4,000 fr. from each of about ten out of twenty-five cantons. The canton of Zurich pays an additional sum of 20 centimes a day for each patient who is a citizen of the canton.

The Zurich institution is under the direction of a board of nine male citizens of Zurich, assisted by a committee of nine women, also of Zurich. There is, in addition, a committee of about forty men representing thirteen of the Swiss cantons. The immediate management of the institution is in the hands of a superintendent, a resident physician, and a resident clergyman; and the Executive Committee is composed of a president, a secretary and a treasurer. State supervision is exercised by

(a) an official specially appointed by the Government,

(b) by the official district physician,

(c) by the Board of Education of the city of Zurich and the District School Commissioners,

(d) by the Auditing Committee appointed by the Council of the canton.

An ideally conceived and fully equipped institution for epileptics should comprise the following divisions:

(a) a building for approximately normal children, male and female,

(b) a building for approximately normal female adults,

(c) a building for approximately normal male adults,

(d) a building for idiotic epileptics, male and female,

(e) a building for insane epileptics, male and female,

(f) a building for sick epileptics, male and female.

If the above plan offers financial difficulties, as is especially likely to be the case when the institution depends on private charity and the money is only gradually subscribed, the va-

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rious divisions will have to be built successively; but it will be found most advantageous to construct them in the order above suggested:

(a) The building for epileptic children should be first constructed because they are excluded from the public schools and because the prognosis of the disease is more favorable for youthful patients than for those of more mature years.

(b) The building next provided should be that for adult females, whose needs are easier to provide for in a new institution than those of adult male epileptics, who are often very difficult to control. And so on down the list (c), (d), (e), and (f).

In arranging the charges, it is best to divide the patients into three classes. For the poor patients comprising the third class the price of board at Zurich is from 300 to 600 fr.; for second-class patients the price of board at Zurich is from 700 to 1,200 fr.; and for first-class patients the price is from 1,600 to 3,600 fr. Patients of the first class have private rooms, separate service, and table. In respect to food and service the second and third classes form one class—the so-called second class in distinction to the first class above mentioned. The dietary should be as non-irritant as possible, preference being given to milk and eggs in various forms, and alcoholic beverages of every description should be absolutely excluded. Epileptics should be plentifully and wholesomely nourished.

About twenty-four hours a week of school work of a suitable nature should be allowed children of the legal school age, their studies being such as are ordinarily taught in the lower grades; i. e., Biblical history, object lessons, language (reading, writing and composition), arithmetic, history, geography, natural history, drawing, singing, and gymnastics without apparatus. For the more able pupils a foreign language may

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be added. Studying outside of the schoolroom is very seldom to be recommended. Classes for adults in accord with their mental ability should also be formed.

The following pursuits will be found appropriate:

(a) For children outside of school hours.

(aa) For boys: in the summer time, work in the garden and on the farm; in the winter time, weaving carpets and slippers, weaving straw, and other such handiwork.

(bb) For girls; simple feminine handiwork—knitting, sewing, housework.

(b) For adults.

(aa) For men; gardening, farming, book-binding, cabinet-making, tailoring, basket-weaving, turnery, brush-making, splitting wood.

Work requiring a fire should be excluded, such as smith's or plumber's work; also work on buildings at an elevation, as carpenter's and mason's work, plastering, painting, etc.

(bb) For women; needlework and housework, assisting in kitchen and laundry, and in the summer in light farm-work. Work over a stove, near machinery in the laundry, and ironing are to be excluded.

The grounds of an institution for epileptics should be entirely inclosed, forming a distinct entity. The farming land and gardens with the corresponding buildings should lie within the institution grounds, which should also contain the office buildings, the schoolhouse, a gymnasium, a chapel, and a hall for entertainments and games.

The patients should be made to feel that the institution is a home to them and every effort put forth to make them happy in it. This spirit can be encouraged by Christmas and birthday festivities, by excursions, picnics in the woods, meals out-of-doors, games, photography, theatricals, operettas, and visits from relatives. The patients also can take part in fes-

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tivals at haying time, grape-gathering, etc. In the Zurich institution the patients are annually taken by a special train to the lake, where they are treated to a steamboat excursion. An institution for epileptics should and can be pervaded by a cheerful atmosphere.

The institution should be preserved from the narrow religious forms and exaggerations to which so many epileptic patients incline, but many will find their chief support and comfort in religious teachings.

The simple daily life of the institution, with its regular hours, careful diet, its quiet and restful atmosphere, and its various forms of work and amusement, furnishes for many patients a remedial force which is not to be underestimated. In addition, there is the specially arranged dietary, baths, etc.

In every well-governed institution a general plan of treatment will be avoided and each case considered individually. The physician who is skilled in psychiatry will of course make use of the remedies recommended by scientific experience, among which the bromides maintain the first place. He will also study the scientific data obtainable from the histories of his patients and constantly endeavor to find new means for improving their condition.

The actual results thus far obtained in the Zurich institution are unfortunately still far from satisfactory:

Cured, 10 per cent.

Improved, 40 per cent.

Unimproved, 50 per cent., including from 2 to 4 per cent. mortality.

May the praiseworthy efforts of the first annual meeting of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, to be held at Washington, greatly add to the welfare of suffering epileptics.

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SWEDEN.

WILLIAM PRYOR LETCHWORTH, LL. D.,

President of "The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics,"

SIR:—The United States Minister at this city, Mr. William W. Thomas, Jr., has shown me your letter to him of March 18th last, requesting him to procure information in regard to what has been done for epileptics in Sweden, and also your interesting work, "Care and Treatment of Epileptics." In reading this work, I was very much surprised when I found how much has been done of late years and is still being done in the United States to ameliorate the hard fate of epileptics. I must congratulate you on the good results already attained —these grand and so carefully planned institutions for epileptics—and I heartily wish you success in your beneficent work.

I blush at the mere thought that nothing special has been done for the care of epileptics in our land. At present there are not even any reliable statistics in regard to them. At the census taken on December 31, 1900, all who suffered from epilepsy were to be specified in the statistics, but it will be a year or more before the results of these statistics will be known.

As far as I know there are no public or private institutions for the care of epileptics in Sweden. Thus they must be cared for either in their respective homes or at the poorhouse, or at insane asylums if they suffer from more severe forms with expressions of insanity.

In Sweden there are, it is true, one or two small private

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institutions for the care of epileptic idiots, but your question does not refer to these.

According to the Swedish law of 1734 and a Royal Letter of 1757, no person who is known to suffer from epilepsy is allowed to contract marriage.

I am sorry that I have so little to tell.

I have the honor to be, Sir,

Yours very respectfully,

(Signed) O. MEDIN, M. D.,
Professor.

Stockholm, April 5, 1901.

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THE STATE OF EPILEPTICS IN RUSSIA.

BY PROFESSOR PAUL KOVALEVSKY,

ST. PETERSBURG.

The care of epileptics is a very new question. Only recently has it been called to life, and still more recently has it found practical application. This may be proved by the fact that in most civilized countries of the Old World the subject does not receive consideration commensurate with its importance, and, moreover, not to the same extent everywhere. Thus, in some institutions for epileptics in Germany we have a well arranged scientific-hygienic side of the question; in others there is a model application of Christian love, humane care, and wisely adapted labor, but a lack of scientific observation and treatment; and in both classes of establishments the arrangements for medico-pedagogical treatment are inadequate. The organization of special institutions for the care of epileptics in Switzerland is excellent, notwithstanding insufficient provision is made for scientific observation and medico-pedagogical work. French institutions are flashing with French genius in their provisions for medico-pedagogical work, but leave us much to expect on the hygienic and dietetic side. Austria, Italy, and other Continental countries have done next to nothing in creating special provision for the care of epileptics. America alone has joined with large provision an equally abundant scien-

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tific knowledge. The practical genius of America has also applied scientific data in making provision for this class. This is the reason why the attention of every thinking man of science and neuro-pathologist is involuntarily attracted to the New World, and why he feels for it a sympathetic regard.

But what is done for epileptics in Russia? I dearly love my native land; I am devoted to it with all my soul and proud to feel myself a son of this country—young at present, but grand in future possibilities; still, to my great sorrow, I am obliged to confess that in Russia nothing has been done for epileptics. To the first question that presents itself—What is the number of epileptics in Russia?—there is no answer. Official statistics upon the subject have not been collected and correct figures cannot be given for the whole Empire. However, we have certain private data from which an approximate estimate can be made. In the three governments of St. Petersburg, Moscow, and Nijni-Novgorod an investigation was made among their several populations in order to determine the number of lunatics and epileptics. It was evident according to the data of Dr. Bielakoff that in the government of St. Petersburg, epileptics constitute .05 per cent. of the population; the data of Dr. Yakowenko for the government of Moscow show .055 per cent; and the total of Dr. Kostschenko's data for the government of Nijni-Novgorod shows .054 per cent. These three governments belong to the north and middle region of Russia. If the per cent. of epileptics there is from .05 to .055, it is easy to compute that in the remaining part of Russia the per cent. of epileptics is not less than .05. I state this on a basis of the following facts: Caucasus is a country of grapes and wine-making. The drinking water from the mountain rivers is bad, but the wine is good. The natives of Caucasus quench their thirst not with water but with wine, and the wine is no light one. It contains from

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5 to 15 per cent. of alcohol. Wine-drinking is so common in Caucasus that no one considers it inebriety. Everybody knows what a high percentage of epilepsy is caused by the abuse of alcoholic beverages. Furthermore, the population of Caucasus is composed of nations, which, although very ancient, still remain in their earlier state of culture. It is also generally known that such people are oftener subject to convulsive disorders than even to mental diseases. Taking into account these two facts, we are obliged to admit that Caucasus presents a much larger percentage of epileptics than Russia proper.

My deductions may be confirmed by a personal experience. During the last fifteen years I have spent the summers at Caucasus, where I have a medical practice drawn from a large district; and in no other place have I had so large a proportion of epileptics among my patients. But the ratio in Caucasus is probably not higher than it is among the inhabitants of Siberia—the Tschuktschis, Youkagirs, Samojeds, Giljaks, and others; for inebriety is as marked there as in Caucasus, and the general social development of the population is still lower. We shall therefore not be mistaken if we accept for the whole of Russia the per cent. of epileptics as .05 per cent. of the population. Estimating the entire population to be 160,000,000, we are forced to the conclusion that there are not less than 80,000* epileptics in Russia—not an insignificant army. What is done for them?

At the present time the whole civilized world is agreed in the belief that epileptics are not proper subjects for general hospitals, because they are not ill during the intervals between the attacks; asylums for the insane are not fit places for them,

*Shoutelwort and others affirm that there is throughout Russia 1 epileptic to 1000 persons. "Epilepsie;" Kovalevsky, p. 110.

Applying the ratio of 1.5 to 1000 inhabitants in European Russia, the result would be 138,000 epileptics. "Care and Treatment of Epileptics;" Letchworth, 1900, p. 15.

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as the ratio of epileptic insane in the epileptic class is but 1 in 15; prisons are no place for them, as there are very few criminals among them. It is self evident that they need special establishments, which must be built for them. No such institutions exist in Russia at the present time, and such epileptics as endanger the public welfare, are placed in lunatic asylums. And where are the rest of them? They are at home. What may be the consequence of such a state of affairs? You in America know, but we as a people have not yet realized it. The Government is likewise deaf to the needs of this class. Notwithstanding a physician and alienist is in charge of the State Medical Department, the medical profession and Russian society in general see less result than would be the case if the position were not occupied by an alienist.

An idea is gaining ground in Russia, however, both in official and private circles, that it is indispensable to organize special colonies and institutions for epileptics; and it is hoped that the importance of the subject will soon receive large consideration and that humane provision will soon be made for this sadly neglected class.

"There is always something good in what seems bad," says a Russian proverb. We can see one good side to our dilemma. Being late in making provision for epileptics, we shall profit by the experience of those countries that have given attention to the subject and thus avoid some mistakes. Most instructive for us will be the deeds of our neurological American friends, who always know how to unite the genius of science with the genius of practice, which is in accordance with the character of their nature.

One may ask, is there indeed nothing done for epileptics in Russia? There is, but not much—so little that it is a shame to mention it. We have at St. Petersburg an asylum called

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the "Queen of Heavens" for 50 epileptics, another one at Great Grebetsky Street for from 30 to 40, Lachtnisky Asylum of the Blue Cross for from 20 to 25 patients, an evangelical asylum for from 30 to 40, a barrack at the station "Udelnaja" for 50, a private establishment at Riga for between 30 and 40, another private one at St. Petersburg for from 30 to 40 patients. In all, there is provision for about 300 patients; but at least 100 of the cases are imbecile or feeble-minded children, leaving room for only 200 epileptics out of 80,000 in a population of 160,000,000.

Deserving of particular mention among these small institutions for epileptics is the asylum of the Queen of Heavens, which was founded by a high priest, Tgnaty, and remained in a pretty bad state of management. Last year I published in one of the most influential of Russian newspapers—"Norvoje Wremja"—a series of articles about the care of epileptics in Russia. The administration of the asylum of the Queen of Heavens was much offended by this, but a lively discussion followed and the asylum began to be set in order. Most fortunate of all was the fact that the metropolitan of St. Petersburg, Antony, a man of uncommon intellect, kindness, and energy, took the asylum under his patronage. While we are anticipating great things from the government in the way of making provision for epileptics, we feel sure that the Queen of Heavens Asylum will do much for them in a small way: *Non multum, sed multa.*

What are the needs of Russia in regard to the care of epileptics? I should be glad if our country would follow the example of America. My ideal for Russian institutions for epileptics is as follows: a picturesque locality and hygienic surroundings like those at the Zurich institution and in Switzerland generally; the accommodations, order and scientific surroundings of Wuhlgarten and Uchtspringe;

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Bielefeld's love and self sacrifice; the education and medico-pedagogical work of the French genius; and chiefly the scientific principles as practically applied in the homelike life, the plain but wholesome diet, and the regulation of labor in America.

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ITALY.

Insane Asylum of Santa Maria Della Pieta,

Rome.

To the President of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, Washington, D. C., U. S. A.,

SIR:

As I am requested by His Excellency, the Ambassador of the United States of America, to His Majesty the King of Italy, to give an account of the care of epileptics in Italy, I do myself the honor of making the following statement:

It is a sad fact that, while in Germany, in Switzerland, in France, and in the United States of America numerous colonies and institutions exist for the purpose of ameliorating the terrible consequences of epilepsy and rendering less painful the unhappy existence of those who are afflicted with this dread disease, with us in Italy, on the contrary, nothing has been done; nothing has been proposed, although statistics show that our country contains some seventy thousand epileptics.

Those epileptics who may be suffering from some positive mental disturbance become inmates of the public insane asylums, which they leave, however, as soon as the derangement ceases. Those alone remain who show aggravated symptoms of idiocy, imbecility, or continued mental weakness. Some

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epileptics are received into the public hospitals out of charity rather than as a regular way of disposing of them, and usually they are dismissed after a few days.

The consequences of these conditions may easily be imagined. Many of these people are apt to become thieves or fall into habits of intemperance, and soon become inmates of prison cells; so that in the courts experts are often forced to lift up their voices in protest against holding such criminals responsible. Others, and they are not a few, may be seized with a fit and fall while in the street or into the fire, and thus suffer injuries of the gravest character. Epileptics while in the insane asylums are put with the other patients, where they become brands of degeneracy, plotting, and forming a source of continual danger to the *personnel* of the institution —to the physicians as much as to the attendants and the patients.

In Rome we often witness scenes that are most painful. The public hospitals try as far as possible to get rid of those epileptics who give the administration any unusual care, and since the managers have not always the courage to dismiss them entirely, they seize upon the slightest provocation to send them as insane to the asylum. There the examining physicians do not find any reason for detaining them beyond the period of observation, so they send them back to the hospital. Thus the epileptics are tossed back and forth from one institution to the other, never able to have the benefit of a continuous curative treatment, passing their lives in idleness, and rapidly sinking into that degeneration of character which wise institutional care might have avoided.

I applaud the promoters of that congress which is assembled for the noble purpose of collecting the opinions of all nations as to the means of alleviating one of the most terrible maladies of humanity; and I should consider myself fortunate if

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the few words I have written, which are the statement of a sad fact, could be recorded by this congress and could find an echo in my country.

(Signed) Dr. Giovanni Mingazzini,
Prof. Neuro-pathology in Rome.

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TURKEY.

In reply to the request, made through the American Minister, the Honorable John G. A. Leishman, for information respecting the provision for epileptics in Turkey, Dr. S. C. Zavitsianos, President of the Imperial Society of Medicine of Constantinople, writes:

"I am in receipt of your communication respecting the meeting to be held on the 14th and 15th of May next in Washington, D. C., and I should be very happy if I could contribute in any way to the efforts the National Association for the Study of Epilepsy is making to benefit epileptics. Unhappily, in this country the attention of charitable people has not yet been turned to the care of epileptics. There are general hospitals, asylums for the insane and societies to aid the poor; but there are no institutions for the blind, for deaf-mutes, nor for epileptics; therefore, the latter are taken care of by their parents or friends. Charitable institutions have been endowed through the generosity of benevolent people and are controlled by religious organizations.

"I am sorry that this country will not be represented in the congress."

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INDIA.

The following letter from Dr. Arnold Caddy, F. O. C. S., Calcutta, India, is self explanatory:

WM. PRYOR LETCHWORTH, LL. D.,

DEAR SIR:—Your work on the "Care and Treatment of Epileptics" was handed me by your Consul-General in this city, Hon. R. F. Patterson, and at the same time he asked me to furnish you with statistics respecting epilepsy in India.

Full and accurate statistics of the death-rate from epilepsy in the whole of India, with its population of upwards of 300,000,000, are not available. In the native states, with a few exceptions, there is no system of registration; but in the various provinces of British India some reliable statistics are to be obtained. I will give you what statistics there are published regarding the Province of Bengal, which has a population of upwards of 80,000,000.

In this province there are but five lunatic asylums. During the year 1900 there were only 234 fresh admissions of lunatics to these institutions, and of these only three were epileptic cases. During the same year the average number daily confined in these asylums was 898, and of these only 43 were epileptic cases. In 1899, among European troops in India, out of a total average strength of 67,697 men there were 86 cases of epilepsy admitted to hospitals. In the same year, 1899, among the native Indian troops, out of a total average strength of 128,529 men there were but 63 cases of epilepsy admitted to hospitals for the same cause. And in the jail

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population of India in 1899, out of a total average strength of 110,016 prisoners there were 141 cases of epilepsy treated in the jail hospitals. I have had a large practice in Calcutta for the past ten years, and I can recall seeing only two cases of epileptic fits in the streets of this city, one case in a native and one case in a Eurasian. I have seen two cases of epileptic fits among Europeans in my practice, but I have been frequently consulted by patients liable to epilepsy.

As at home, the bromides are our sheet-anchor of treatment. I hold the post of surgeon to the Coolie Emigration Depot, 21 Garden Reach, Calcutta. From this Depot several thousand coolies are sent every year to Fiji, Jamaica, Trinidad, and other West Indian Islands, besides Mauritius and Natal. The coolies are recruited by native agents from the country districts of Central and Northwest India, and are persuaded to try their fortunes across the sea, only male and female agriculturists being sent. The coolies are examined by a native doctor up country and dispatched by rail to Calcutta, where they are examined by myself and the surgeon of the ship in which they sail. They are again inspected by the Protector of Emigrants and by the Medical Inspector of Coolie Depots. The coolies remain in the Depot on an average two weeks and are under constant supervision. I have no figures by me, but since the beginning of this year some 7,000 coolies have passed into the Depot, and so far no case of epilepsy has been observed. The coolies, as a rule, are dispatched in sailing ships, each carrying some 700 souls; and I have been assured by Dr. Hessard, one of the ship's surgeons, that epilepsy is very rarely seen on the voyage to the West Indies, which lasts, as a rule, upwards of three months. Epilepsy, however, does exist in India, and all medical writers testify to that. The last writer on Tropical Diseases, Dr. B. Scheube, in the second edition of his work "Die Krankheiten der Warmen

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Länder" says (p. 652): "Epilepsy, so often seen in India, Farther India, Ceylon, and in many other hot countries, is seldom met with in Malaya."

There is no poor-law in India, for native paupers are entirely supported by the charity of their fellow-countrymen; and the only workhouses in India are those of Calcutta, Bombay, and Madras, and they are intended only for the Europeans and Eurasians. There are, therefore, no means of ascertaining whether epilepsy is more frequent among the pauper population of India than of European countries. There are no cottage homes in India for epileptics, and so far they have not been needed. The population of India is chiefly agricultural, and the big cities contain largely a male exotic population which comes to town to work for a time and returns sooner or later to the country, where the females, the aged, and the young have been working in the country home, and the savings of the adult males who work in town largely contribute to keep this home going.

In reading your work, I have been impressed with the thought that the high pressure of town life seems to be largely answerable for causing epilepsy and that the treatment in cottage homes, which is so successful, is nothing more than sending man back to the land to do the peaceful work which he was always intended to do.

If there are any other points connected with epilepsy in India on which you would like information I will do my best to get it for you.

Yours very faithfully,

(Signed) ARNOLD CADDY, F. O. C. S.

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JAPAN.

[Brief as it is, the information that comes to us from a country to which the attention of our people is attracted by the many novel features of its public institutions and social life, is interesting, especially so in view of the expectation awakened of obtaining further knowledge from the same source.—EDITOR.]

Akasaka Hospital, Tokyo, Japan.

WILLIAM PRYOR LETCHWORTH, LL. D.,

DEAR SIR:—I was requested some time since by the United States Legation to write a statement for you concerning the care of epileptics in Japan. Having met but a few such cases in the course of some fifteen years practice here and not having had any special experience in the treatment of epileptics, I consulted Dr. Miura, Professor of Nervous Diseases in the Imperial University of Tokyo, who informed me that as yet no special means have been taken to care for these poor unfortunates in homes or hospitals. I have since written Professor Miura asking him to let me have some written statement concerning the frequency of occurrence of epilepsy in Japan, as well as any observations he may have to make upon the advisability of State care of epileptics in Japan, forwarding your most valuable work on the "Care and Treatment of Epileptics" for the Professor's perusal. When I shall have further information from Professor Miura, who is the foremost neurologist in Japan, I shall be glad to send it to you.

Yours sincerely,

(Signed) W. NORTON WHITNEY.

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THE OUTLOOK IN AUSTRALIA.

Report from Miss Alice Henry, South Yarra, Melbourne, Australia, to the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics.

"I have just received a request from Mr. Letchworth and Dr. Peterson for information on the condition of epileptics in Australia. As I am away from home and far from all sources of information, I can make only a very brief statement. Up to the present time I do not know that any action has been taken in Australia to provide for sane epileptics. Insane epileptics are kept, that is, sheltered, fed, and clothed in insane asylums. The lot of the sane epileptic is here, as in many other places, most pitiable. There is the same difficulty about obtaining work, and keeping it when obtained; the same drifting into insanity of the neglected and idle sane.

"However, there is now a prospect of better things in store. About a year ago, a lady, name unknown, made an offer of £3,000 to the Austin Hospital for Incurables, Melbourne, for the assistance of sane epileptics. The managers consulted with medical experts and recommended that the money should be used to form the nucleus of an industrial farm colony on the plan pursued at Bielefeld or Maghull. The matter is now under consideration, and it is to be hoped that some definite decision will soon be made.

"In order to understand fully all that was to be learned from the experience and the difficulties of others, workers here

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communicated with the National Society for Employment of Epileptics, London; with Dr. F. W. Mott, London; Dr. Frederick Peterson, your Vice-President; Dr. Wharton Sinkler, of Philadelphia; and others: and we have to acknowledge the great assistance which they have rendered to the cause in Australia by furnishing information and literature for distribution. The latter is the most important aid we could receive, for so intense is the public ignorance upon this subject, even among the educated, that one has to preach one's gospel with tract in hand and chapter and verse for every word.

"A movement is also on foot in the neighboring state of South Australia by the Managers of 'Minda,' the home for feeble-minded children; and when I was in Adelaide at the beginning of this month I was requested to give a public address on the farm-colony system for epileptics. It was well attended and has given rise to much discussion and an increased interest in the subject.

"The visit of H. R. H. the Duke of York, President of the leading English Society, who is to open the first Federal Parliament of Australia next month, may stimulate public attention; and Lady Tennyson, wife of the State Governor, and the laureate's daughter-in-law, is keenly alive to the needs of this unfortunate class.

"Here, then, the matter for the present rests, but with the excellent example set for us in other parts of the world I hope soon to be able to report that something has been done."

South Yarra,

19th April, 1901.

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II.

MINUTES AND DISCUSSIONS.

FIRST ANNUAL MEETING OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS, HELD IN THE MEDICAL DEPARTMENT OF THE COLUMBIAN UNIVERSITY, WASHINGTON, D. C., MAY 14 AND 15, 1901.

REPORTED BY MRS. ISABEL C. BARROWS.

The meeting was called to order on the afternoon of May 14th by the President, Hon. William Pryor Letchworth, who made a brief introductory address. This was followed by the reading and presentation of papers and reports, all of which, as also those presented on the following day, are printed in the preceding pages.

For greater convenience and a better understanding of the subjects considered, the discussions of the two days are consolidated. The papers being numerous and the time allotted to the meeting brief, the topics discussed were few, and these were only briefly dealt with.

The discussion on the prevention of epilepsy was prefaced by the reading of a letter (page 165) from Dr. Oskar Medin, Professor at the "Karolinska Institutet," Stockholm. The President called attention to the fact that the marriage of epileptics has not been allowed in Sweden for upwards of one

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hundred and fifty years, and said that the results of statistics now being collected there would be awaited with much interest.

Following the reading of Dr. Medin's letter, the President called upon Dr. Knight of Connecticut to open the discussion.

DR. KNIGHT.—A great many of us are interested in the subject of epilepsy, but I must say that the further I get into it, the less I know about it. I think, however, that the steps taken by two of our States, New York and Ohio, are steps in the right direction. If they do not cure a single case they are going to do a great deal in preventing the increase of epilepsy in our country. It is a notable fact, and I presume that all who are here know it, that we who are superintendents of institutions for the feeble-minded, in studying the history of the children sent to us find that epilepsy is one of the greatest causes of their mental enfeeblement; not a direct cause, but we find that epilepsy existed on one side or the other in grandparents or parents. There is no question in my mind—and I think it is not questioned by others—that epilepsy is one of the chief causes of feeble-mindedness.

Now there are a few States, and Connecticut has led in this direction, which prohibit the marriage of the feeble-minded and of the epileptic. That law, of course, is imperfect, but so far as it relates to the feeble-minded of Connecticut no one questions the advantage of the law. The selectmen of our towns are interested in it. They have found that the housing for life of feeble-minded women is not only the most economical, but one of the best things they can do. I have no patience with people who bring up this question of individual rights as being applicable to the feeble-minded person. I will not say anything about other defectives, but if a feeble-minded person has become a ward of the State, the State has absolute control over him, and the question of individual rights should never be brought up; he has no individual rights. As to epileptics, while I believe that a large per cent. of them should not be allowed to marry, yet there is a per cent.—a very small per cent.—where the question of individual rights may properly be considered, but only where they are not wards of the State. The epileptics who have become wards of the State are nearly

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all mentally deficient, and the law which applies to the feeble-minded should apply to them. I do feel that all the States should consider this question of prevention.

I am looking forward with anxiety to see the results of the census for 1900. The census of 1890 showed that the feeble-minded had increased over two thousand a year from 1880 to 1890. Now if that is to go on, if that increase is to take place year after year, we must consider something besides the mere care of this class. We have got to do something to prevent the disease and this great increase, or our civilization, I believe, will not stand.

A MEMBER.—What is your opinion about the effect of alcoholic beverages in causing epilepsy?

DR. KNIGHT.—Of course I think stimulants in excess are harmful. The statistics that I have at my command are those limited to the institutions I have been connected with. Of my cases I think about five per cent. have been caused in that way.

QUESTION.—Would you class that as true epilepsy?

DR. KNIGHT.—I would. I believe in hereditary epilepsy, but I think a large per cent. of the epilepsy we come in contact with was originally symptomatic epilepsy. In such cases, if an experienced physician is brought in contact with them when the convulsions first occur and he is enabled to locate the cause, many symptomatic cases will not become chronic.

DR. PORTER, of Illinois.—One of the speakers has referred to the fact that feeble-mindedness, idiocy, and other nervous manifestations are often the results of epilepsy. We have been studying the cause of epilepsy diligently for twenty years. The study of pathology has developed since I was a medical student, therefore my study has been the epileptic patient himself, watching the patient from day to day, year in and year out; and my conclusion is that degeneration is the basis of epilepsy—impairment of the nutrition of the cells of the brain and spinal column. This is the common origin of epilepsy, insanity, and idiocy—an impairment of the brain and nerve cells, a perversion of nutrition. That is the starting point, therefore in combating this disease the important thing is to maintain proper nutrition. I believe that this

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degeneration is transmitted and inherited. The cause of this impaired nutrition is congestion of the brain. This theory has been maintained from the days of Hippocrates to the present time. It has been combated from time to time, but I hold to it. I am prepared to demonstrate that convulsions can be arrested and the patient cured. The proposition is first of all, to arrest and control the brain circulation. If the congestion of the brain can be controlled the spasms can be controlled. If you control the brain circulation and improve the nutrition of the epileptic you are on the road to the recovery of the patient. This has been my treatment of the epileptic of two years old to the one seventy years of age. I shall be glad to present here a patient who has been under my charge eight months. He had been a subject of epilepsy for twenty years, but is now at work maintaining himself, and is in better health than for twenty years.

DR. POLGLASE, of Michigan.—I am unable to offer any one single thing in the method of treatment of epilepsy looking toward a cure. We all understand the general treatment—segregation, employment, education, suggestive treatment, and the therapeutic and medical measures that occur to the physician. I agree with Dr. Porter that there is disturbance of nutrition, but where? I am not prepared to say that in every case there is a starvation of the cerebral system. We do find symptoms that point to such irritation, but we find many other influences. When we settle nicely on any one theory it does not take long to knock that theory awry. At one time I imagined I had struck on a treatment that I thought would cover pretty nearly all cases, but in a short time my theory was all knocked aside. I have almost given up the idea that there is such a thing as a reflex condition producing a constant expression of epilepsy. We sometimes have epilepsy which I do not believe to be a true expression of the disease—a true form of idiopathic epilepsy. I should be glad if fifty per cent. were reflex cases. I have had cases that proved to be hysteria pure and simple. Frequently you find the two existing in the same patient. Such a condition may puzzle the ordinary physician, but the specialist soon learns to discriminate such cases. I had one in my institution—a case of hysteria—where, through suggestion, the seizure was nicely carried out. Her family and friends had so pictured to her

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what a seizure should be that she would reproduce a spasm magnificently. She was brought to the institution, where she learned to control her nerves, and for a year she had no expression of epilepsy and was constantly employed.

Another case was a girl of thirteen. I found no cause for the epilepsy. We gave her general treatment, taught her self-control, and to look after her bodily condition. After eight months she went home, and she has had no more attacks. I think the seizures had been caused by intestinal irritation. They were irregular and did not have the usual regular manifestation of idiopathic epilepsy, about which there seems to be a sort of rhythm. The reflex or symptomatic form is apt to be irregular. A vast number of cases of hysteria are on the verge of epilepsy.

QUESTION.—What is your view as to the enactment of laws forbidding the marriage of epileptics?

DR. POLGLASE.—I take it for granted that we accept the laws of heredity. If we discover such a case as I have described, it shows an unstable nervous system, and I should advise such a girl not to marry, and the case just mentioned has been so counseled. She is under the guardianship of a judicious woman. I am emphatically in favor of a law which shall prevent the reproduction of idiots, criminals, and imbeciles.

DR. BULLARD.—I have only one thing to say on this subject. It seems to me that before we discuss it we ought to understand very distinctly what we are discussing. There are many different kinds of epileptics and many different degrees of epilepsy. There are people who have an epileptic seizure once or twice a year, who are to all intents and purposes as able to conduct business as any one. There have been people peculiarly able in their professions who were epileptic. From that standard there are epileptics of all degrees down to those who are of the lowest grades of the feeble-minded and the insane.

In considering the question of the marriage of epileptics and of laws in relation to it, we should consider what class of epileptics we are dealing with. If we mean to say that every man who has one attack a year, and who may, perchance, be conducting a large and important business, is to be prevented from marrying, let us understand this clearly. We must

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understand that there are different degrees of mental ability among epileptics. Then there is the question whether every epileptic is liable to produce epileptic children. A fit may be produced by several different causes and often is produced by several causes acting at the same time. Such attacks may be produced by injury; that is not uncommon. When we speak of symptomatic epilepsy I think we generally mean epilepsy of which we know the cause or causes. In drawing up a law we should distinctly understand what class we mean, and we should not class people who are epileptic from injury with those who are epileptic apparently without cause, but in whom we have strong reason to believe the disease is hereditary.

I found in my records of children that there were many cases in which the disease began very early, and yet we are unable to find any direct hereditary cause. While there is always a presumption that such a cause may exist we have no right to assume such a cause. Therefore, I feel that in examining the subject we should go very slowly and define clearly what class we wish to prohibit and how far we think it right that they should be prohibited.

MR. MACK.—If I understand the Minnesota law recently passed, it is that the parties who wish to marry must be approved by a medical board which shall determine whether the physical and mental conditions are such that the marriage may take place.

DR. HILL.—That was originally in the law, but the part relating to the examination by the committee or body of physicians was stricken out, and the decision is left to the clerk.

DR. DOWN, of Connecticut.—I have studied this question in most of its phases for the past fifteen years, and became much interested in the remarks emanating from the gentleman who spoke so favorably of the congestion theory.

I feel confident he does not consider this view as possessing the feature of novelty, for I recall the experiments made by Dr. Keniston of the Connecticut Hospital for the Insane more than ten years ago. The doctor noticed that by pressing firmly on the carotid artery on either side, the convulsions were controlled in some instances; but in attempting to generalize, he became skeptical, and, finally, after much expen-

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diture of time and labor his skepticism ripened into a complete disavowal of the claim he at first instituted. These statements I have made are directly opposed to the views of the gentleman who has preceded me, but I am sure he will not construe a simple difference of opinion into a personal insult; an unfortunate circumstance which has been known to occur even in scientific bodies.

The nutrition theory is hardly more plausible than the congestion theory; for we may have hypernutrition or hyponutrition and concomitant convulsive seizures. There are many theories extant regarding epilepsy and, doubtless, many more to follow. I have no views to present that are striking or novel, but for the present I am securing all the evidence I can from a close personal observation of the mental equivalents which, in my judgment, is the Appian way to the seat and controlling elements of this most distressing symptom.

In Connecticut our Committee encountered some difficulties in collecting statistics, but I will give you briefly the results of our work in this direction during the past four months.

The total number of cases of epilepsy in Connecticut as obtained by the committee represents an aggregate of about five hundred and fifty cases. This shows a much smaller ratio than that in other States, and is accounted for from the fact that but little interest is taken in these cases by the general practitioner; but chiefly for the reason that many epileptics are not under medical care or oversight, and fail to become recorded when an attempt is made to secure reliable statistics.

In other States, and in the country at large, a ratio of one epileptic to seven hundred of the population is considered sufficiently accurate for statistical purposes. Applying this rule to Connecticut, she will be credited with about thirteen hundred cases in round numbers. This, your Committee believes to be slightly in excess of the correct figures, and considers one thousand to be nearer the exact number.

The proportion of sex in the number given is, 320 males to 230 females. We find 128 adults insane, 125 feeble minded, to which should be added 21 children of the latter class.

Ten and one-half per cent. are under fourteen years of age.

Those in asylums number 121.

In the school for feeble-minded at Lakeville there are 47, or nine per cent. of the total number.

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As the report will be presented more fully at the time of its publication, I will not trespass further upon your time and forbearance.

QUESTION.—What is the population of Connecticut?

DR. DOWN.—Over nine hundred thousand.

QUESTION.—Have you many foreign residents?

DR. DOWN.—We have a heterogeneous population. We are close to New York and have harbors in New Haven and New London, through which many foreigners find their way into our State.

MR. GARRETT, of Philadelphia.—This subject is interesting to me. I would have been glad of a statement from one of the speakers as to the exact reason for the necessity of separating epileptics from the feeble-minded and from the insane. Of course, certain reasons are manifest to all of us, but do they cover the ground? Inasmuch as epileptics are not always insane or feeble-minded they are a separate class, and yet they seem to degenerate and are apt to become one or the other even if they are not so at first. I remember one or two cases that I have known myself, one of which has been at the institution under Dr. Down. He was a very bright person. He was not a Caesar, nor a Napoleon, both of whom were said to be epileptics; but he was a clever, scientific man, and for many years I never saw anything in his conduct to indicate that he had any tendency to insanity or feebleness of mind. Of late years, however, he has manifested distinct evidences of insanity. If there are other reasons for separation it would be well that all philanthropists should distinctly know what those reasons are.

DR. SPRATLING.—It has been my privilege to study the epileptic and his disease for nearly fifteen years, at the New Jersey State Hospital at Morris Plains and at the Craig Colony in New York, founded in 1894.

We know that in from 40 to 50 per cent. of the seizures consciousness is not entirely lost—it is only disturbed; or it may be lost from the fraction of a second to days, when the patients go around in an automatic way and are not conscious of what they are doing. Their motor functions are not impaired; in fact, they are often unusually active, but mentally

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they are a blank—consciousness is lost. There is another type of the disease in which the manifestations of an attack are so slight that none but a trained observer would know when the patient was having a seizure; still, for a brief space of time the patient's consciousness is destroyed. Strangely enough, it is this type of epilepsy that is claimed to be most destructive of the faculties of the mind.

As to the theories of the causes of epilepsy, there are many. If you say that anemia of the brain is the cause, or that congestion of the brain is the cause, you can get together sufficient data to apparently prove either right or wrong. The congestion theory was popular many years ago, but has been generally abandoned. The Germans once thought that epileptic attacks were due to cerebral anemia caused by a sudden spasmodic contraction of the large blood-vessels of the neck, so cutting off the blood supply from the brain. But whatever value this theory may have had, it was largely destroyed by the fact that the bromides, the most useful of all the drugs in suppressing epileptic manifestations, acted by producing anemia of the brain, a condition exactly similar to that supposed to have caused the seizure under the anemia theory.

Neurologists to-day seem to agree that epileptic convulsions are caused by sudden discharges of nerve force, the seat of the discharge being in the motor regions of the brain, its cortex or outside surface. The functions of the large motor cells in this part of the brain are to receive and store up nerve energy, and these cells are controlled in their action by the sensory cells that lie in the brain tissue just below them. The sensory cells act as inhibitors; that is, they regulate and control the action of the motor cells above. When these sensory cells become weakened or diseased, they lose their power of control over the great energy cells and these in turn explode periodically, or give off energy in an abnormal way. Probably in the lighter forms of epilepsy, in which there are mental symptoms only, the same mechanism exists. The problem of the future seems to be to find out how and why these sensory cells become weakened or diseased and how their normal functions can be restored.

As to heredity, Dr. Gowers states that epilepsy is inherited in from 35 to 37 per cent. of all cases, being greater by 2 per cent. in females than in males, because of the physiologic

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epochs through which women must go and from which males are exempt. We may accept these figures as being pretty nearly correct. In the study of over a thousand cases, where we went back two and three generations to get the history of the patients, these figures were sustained.

Dr. Gowers also says that 75 per cent. of all cases begin under the age of 20. We have found at the Craig Colony in 1,051 cases that 83 per cent. began under the age of 20. This makes epilepsy essentially a disease of early life. When an individual fifty or sixty years of age develops convulsions and has only two or three a year, I should be very loth to class that individual as an epileptic. I do not believe that a single convulsion makes an epileptic, any more than that one swallow makes a summer. Certain poisons may produce convulsions, but these should not at first be termed epileptic, the two are entirely separate and distinct. So are the convulsions of hysteria, which are not at all like genuine epilepsy. But we must bear in mind that the same person may have hysterical and epileptic convulsions. We have three cases of this kind now at the Colony in an epileptic population of seven hundred.

I saw one morning in Virchow's laboratory in Berlin, eight or ten brain specimens in which capillary hemorrhage in the brain had caused death. The hemorrhagic spots were extremely small, almost microscopical, and had the appearance of little roughened spots, slightly discolored. It was difficult to understand how these minute injuries could have been so disastrous. A week later, in conversation with Dr. Hughlings-Jackson, in London, who is properly regarded as one of the best living students of epilepsy, I asked him what, in his opinion, would ultimately be found to be the cause of what we now term "idiopathic epilepsy," and he promptly said "capillary hemorrhages in the brain." Many years ago, when studying the causes of epilepsy in early life, Dr. Abram Jacobi, in answer to a question of mine, said "Every convulsion, ever so slight, may produce cerebral hemorrhage, with all its disastrous consequences—epilepsy, idiocy, imbecility, or insanity."

I do not believe in primary reflex epilepsy. There may be convulsions due to reflex causes, and the time may come when these pass from reflex convulsions to genuine epilepsy. As

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to types of convulsions, they are as numerous as the causes, and the causes are legion.

I believe the time will come, and should come, when every State will enact laws to prohibit, if possible, the marriage and intermarriage of epileptics. I think such prohibition would be best for the epileptic, best for society at large, best for posterity, and best for the State for economic reasons.

DR. SINKLER.—I have listened with interest and profit to Dr. Spratling and to the reading of his paper. There is no question that the colony for epileptics at Sonyea is the most thoroughly equipped and intelligently and successfully managed of any. I agree with him as to the necessity for a systematic and consistent form of organization. Without that I do not see how any colony can be successful. It is an important point to have each cottage in a colony a separate and complete home in itself. The plan of dividing up the different patients into classes is most admirable, but it can be carried out only in such large institutions. Where you have seven or eight hundred patients there must be a large per cent. of those who have only occasional attacks, and therefore they can be put together and made to do things for themselves. When this method is employed it makes a home feeling and every patient can feel that he belongs to a family. They have something in common. If they have their meals in their own cottage and assist in doing the work themselves they are much more content, and better physically and mentally.

It is of great importance to have a separate building for an infirmary for those suffering from some acute illness or who need surgical treatment.

A telegram was read from Dr. H. C. Rutter of Gallipolis, saying that he was prevented from attending the meeting on account of severe illness in his family. His report as Treasurer of the Association, approved by the Executive Committee, was submitted, showing a balance of $15.75.

The following resolutions, offered by Dr. Bullard, chairman of the Committee on Resolutions, was read and unanimously adopted:

Resolved, That the President and the Secretary are hereby

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requested to make proper acknowledgment to the Honorable John Hay, Secretary of State, for the valuable assistance he has kindly rendered the Association.

Resolved, That the President and the Secretary are also requested to extend the thanks of the Association to the following-named Ambassadors and Ministers for their co-operation in promoting the objects of the Association:

To His Excellency Powell Clayton, United States Ambassador to Mexico.

To His Excellency Charles Page Bryan, United States Minister to Brazil.

To His Excellency William W. Thomas, Jr., United States Minister to Sweden.

To His Excellency George V. L. Meyer, United States Ambassador to Italy.

To His Excellency John G. A. Leishman, United States Minister to Turkey.

To His Excellency Alfred E. Buck, United States Minister to Japan.

To the Honorable Robert F. Patterson, Consul-General, Calcutta, India.

Resolved, That the thanks of the Association be tendered by the President and the Secretary to the following-named foreign correspondents for valuable papers and contributions to this meeting:

Dr. Secundino Sosa, City of Mexico; Dr. Jwar Carlos Fixeui Brandao, Rio de Janeiro; Dr. W. Haoelburg, Rio de Janeiro; Mr. G. Penn Gaskell, London, England; Dr. William Aldren Turner, London, England; Professor F. Kölle, Zurich, Switzerland; Dr. Th. Kölle, Schloss Pfullingen, Würtemberg; Dr. Jules Morel, Mons, Belgium; Pastor Siebold, Bethel Colony, Bielefeld, Germany; Professor Paul Kovalevsky, St. Petersburg, Russia; Miss Alice Henry, South Yarra, Melbourne, Australia; Dr. Oskar Medin, Stockholm, Sweden; Dr. Giovanni Mingazzini, Rome, Italy; Dr. S. C. Zavitzianos, Constantinople, Turkey; Dr. Arnold Caddy, F. O. C. S., Calcutta, India; Dr. W. Norton Whitney, Tokyo, Japan.

Resolved, That the Association hereby acknowledges its obligations to the Press, especially to the *Washington Post*

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and *Evening Star*, for directing attention to its work and objects.

Resolved, That the thanks of the Association are extended to Dr. E. A. De Schweinitz, Dean of the Columbian University, for the use of the lecture-room of the Medical Department of the University for the meetings; to Dr. Walter Wymann, Surgeon-General, for his courtesy; to Mrs. Sara A. Spencer, for valuable personal services; and to various citizens of Washington who have contributed to the success of the first annual meeting of this Association.

Dr. George H. Knight, chairman of the Committee on Organization, reported the following names of officers for the ensuing year. The report was adopted and the persons named declared elected.

President, Frederick Peterson, M. D.
First Vice-President, William P. Letchworth, LL. D.
Second Vice-President, Professor William Osler, M. D.
Treasurer, H. C. Rutter, M. D.
Secretary, William P. Spratling, M. D.
Executive Committee, William N. Bullard, M. D.; Wharton Sinkler, M. D.; William F. Drewry, M. D.; W. A. Polglase, M. D.; B. M. Worsham, M. D.

DR. BULLARD.—I move that the retiring President be made an honorary member of the Executive Committee. His judgment and experience would be of great value.

The motion was seconded and unanimously carried.

On motion of Dr. Spratling it was voted that the publication of the proceedings be entrusted to the retiring President.

DR. SINKLER.—Before closing I would like to make a motion that a vote of thanks be given to our President, Hon. William P. Letchworth, for the efficient and satisfactory manner in which he has conducted this meeting. We all understand how much the success of the meeting has depended on his efforts. All who are in favor of adopting such a motion will say aye.

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The motion was unanimously adopted.

MR. LETCHWORTH.—It is impossible for me to express in a few words my appreciation of the generous sentiment which prompted the action you have taken. Composed as this Association is of scientists and philanthropists who are inspired by a common purpose to benefit by every possible means a greatly neglected and much afflicted class, the encomium you have bestowed, gives me greater courage while endeavoring to follow the example set before me in the lives of many members of this organization.

Adjourned at 4 p. m., *sine die*.

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CONSTITUTION.

Article I.

The name of the Association shall be "The National Association for the Study of Epilepsy and the Care and Treatment of Epileptics."

Article II.

The objects of the Association shall be:

1. To promote the general welfare of sufferers from epilepsy.
2. To stimulate the study of the causes and methods of cure of this disease.
3. To assist the various States in America in establishing a proper system of care for epileptics.
4. To advocate the care of epileptics in institutions designed to meet their special needs.

Article III.

Any person interested in the scientific study of epilepsy, or in the study of means that aim to aid the epileptic, or in social science matters generally, and expressing a desire to become a member of the Association, may be recorded as such with the approval of the Executive Committee.

Article IV.

The officers of the Association shall consist of a President, a First Vice-President, a Second Vice-President, a Secretary, and a Treasurer. They shall be elected annually by the members present at the annual meeting of the Association. In case of the death or resignation of an officer his remaining term shall be filled by a member elected by the Executive Committee.

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ARTICLE V.

The President shall preside at all meetings of the Association or appoint a presiding officer from those members of the Association who are present. He shall appoint the members of standing and special committees, and shall have the objects and general interests of the Association in charge.

ARTICLE VI.

The Secretary shall keep minutes of the proceedings of all meetings of the Association. He shall give notice when directed by the Executive Committee of all special meetings and keep such accounts and records as may be required.

ARTICLE VII.

The Treasurer shall collect and have charge of the funds of the Association, shall keep a regular account thereof, and make reports thereof to the Executive Committee as required by the Committee and an annual report to the Association. Claims against the Association shall be paid by the Treasurer only upon the audit of the President of the Association and the Chairman of the Executive Committee.

ARTICLE VIII.

There shall be an Executive Committee composed of such members of the Association as may be appointed by the President. The President shall be, *ex-officio*, a member of this committee. It shall be the duty of this committee to define and adopt such course of action as may best promote the objects of the Association, and to devise ways and means for increasing the usefulness and efficiency of the Association.

ARTICLE IX.

This constitution may be amended by a two-thirds vote of the members present at the annual meeting, thirty days' previous notice having been given in writing of such proposed change by the Secretary to all members of the Association.

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HONORARY MEMBERS.

BRANDAO, JWAR CARLOS FIXEUI, M.D., Rio de Janeiro, Brazil.
CADDY, ARNOLD, M.D., F.O.C.S., Calcutta, India.
GASKELL, G. PENN, Secretary National Society for Employment of Epileptics, 12 Buckingham Street, Strand, London, England.
HAOELBURG, W., M.D., Rio de Janeiro, Brazil.
HENRY, MISS ALICE, South Yarra, Melbourne, Australia.
KÖLLE, PROFESSOR F., Director Swiss Institute for Epileptics, Zurich, Switzerland.
KÖLLE, DR. TH., Pfullingen, Würtemberg.
KOVALEVSKY, PROFESSOR PAUL, St. Petersburg, Russia.
MEDIN, OSKAR, M.D., Professor at the "Karolinska Institutet," Stockholm, Sweden.
MINGAZZINI, GIOVANNI, M.D., Professor of Neuropathology, Rome, Italy.
MOREL, JULES, M.D., Commissioner in Lunacy, Mons, Belgium.
SIEBOLD, PASTOR, Bethel Colony, Bielefeld, Westphalia, Germany.
SOSA, SECUNDINO, M.D., Member of the National Academy of Medicine of Mexico, City of Mexico.
TERRES, JOSE, M.D., President of National Academy of Medicine of Mexico, City of Mexico.
TURNER, WILLIAM ALDREN, M.D., London, England.
WHITNEY, W. NORTON, M.D., Akasaka Hospital, Tokyo, Japan.
WILDERMUTH, H., M.D., Stuttgart, Würtemberg, Germany.
ZAVITZIANOS, S. C., M.D., President of the Imperial Society of Medicine, Constantinople, Turkey.

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GENERAL LIST OF MEMBERS.

ALEXANDER, WILLIAM J., M.D., Physician in Charge Emmaus Epileptic Institute, Marthasville, Mo.

ALVORD, AUSTIN W., M.D., President Michigan State Medical Society, Battle Creek, Mich.

AMOS, WILLIAM F., M.D., Secretary Oregon State Medical Society, Portland, Oregon.

ANGELL, EDWARD B., M.D., Rochester, N. Y.

ATHON, W. L., M.D., Superintendent Illinois Asylum for Feeble-Minded Children, Lincoln, Ill.

ATWOOD, C. E., M.D., First Assistant Physician Bloomingdale Asylum, White Plains, N. J.

BAILEY, PEARCE, M.D., 4 West 50th Street, New York City.

BAILEY, STEELE, M.D., Secretary Kentucky State Medical Society, Stanford, Kentucky.

BANNING, EPHRAIM, Commissioner Board of Public Charities, Chicago, Ill.

BARNETT, JOHN R., Illinois Asylum for Feeble-Minded Children, Lincoln, Ill.

BARR, MARTIN W., M.D., Chief Physician Pennsylvania Training School for Feeble-Minded Children, Elwyn, Pa.

BARROWS, MRS. ISABEL C., Tompkinsville, Staten Island, N. Y.

BEATON, A. H., M.D., Superintendent Ontario Asylum for Idiots, Orillia, Canada.

BERNSTEIN, CHARLES, M.D., Assistant Physician Rome State Custodial Asylum, Rome, N. Y.

BIDDLE, CADWALADER, General Agent and Secretary Board of Public Charities, 1225 Sansom Street, Philadelphia, Pa.

BIRNIE, C., M.D., Taneytown, Md.

BLACKFORD, BENJAMIN, M.D., Superintendent Western State Hospital, Staunton, Va.

BLAIR, GEORGE, Superintendent Outdoor Poor, New York City.

BLOCKER, L. M., M.D., Superintendent Insane Asylum, Chattahooche, Fla.

BOIES, HON. HENRY M., Member Committee on Lunacy, Board of Public Charities, Scranton, Pa.

BRACKETT, JEFFREY R., 10 West Madison Street, Baltimore, Md.

BRANNAN, JOHN WINTERS, M.D., 11 West 12th Street, New York City

BRINKERHOFF, GENERAL ROELIFF, Chairman Board of State Charities, Mansfield, Ohio.

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BROSIUS, MARY ALICE, M.D., 1101 K Street, Washington, D. C.
BROWN, CHARLES G., M.D., President Washington State Medical Society, Spokane, Wash.
BUCKLEY, REV. JAMES M., D.D., LL.D., Morristown, N. J.
BUCKNER, REV. R. C., D.D., Buckner Orphans' Home, Dallas, Texas.
BULLARD, WILLIAM N., M.D., President Massachusetts Hospital for Epileptics, 89 Marlborough Street, Boston, Mass.
BURR, C. B., M.D., Superintendent Oak Grove Hospital, Flint, Mich.
BUTLER, AMOS W., Secretary Board of State Charities, State House, Indianapolis, Ind.
BYERS, JOSEPH P., Secretary Board of State Charities, Columbus, Ohio.
CALKINS, MRS. ADELAIDE A., Springfield, Mass.
CARY, CHARLES, M. D., 340 Delaware Ave., Buffalo, N. Y.
CHANDLER, WILLIAM J., M.D., Secretary Medical Society of New Jersey, South Orange, N. J.
CHANNING, WALTER, M.D., Brookline, Mass.
CHEESEMAN, WILLIAM S., M.D., Auburn, N. Y.
CHOATE, HON. JOSEPH H., United States Ambassador to Great Britain.
CLARK, A. W., Superintendent Child Saving Institute, Omaha, Neb.
CLARK, L. PIERCE, M.D., First Assistant Physician Craig Colony for Epileptics, Sonyea, N. Y.
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APPENDIX.

CONNECTICUT.

In August, 1900, the Executive Committee of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics made a request of the Connecticut Medical Society and the State Board of Charities that they should co-operate in ascertaining through a properly organized committee the number of epileptics under public care in the various institutions of the State, and in procuring such information as was obtainable respecting the number and condition of epileptics not under institutional care, and report such information to the Association. In compliance with the request a committee was appointed, composed of Dr. Max Mailhouse, Dr. Frank K. Hallock, and Dr. Edwin A. Down, President of the State Board of Charities, to conduct the inquiry suggested. The thoroughness of the work done by the Committee, and the business-like methods it adopted, are worthy of imitation; and the information obtained and the conclusions reached are so valuable, that, by direction of the Executive Committee of the Association, the report, which it was impracticable to prepare in time for presentation to the annual meeting at Washington, is herewith appended.

REPORT OF THE CONNECTICUT COMMITTEE OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY.

For the purpose of ascertaining the necessary facts, a copy of the appended circular was sent to every practitioner in the State—regular, homeopathic, eclectic, and irregular—whose name appeared in the State Manual, as well as to all such in-

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stitutions—public and private—as would be likely to contain subjects of our inquiry. As a consequence, there were about nineteen hundred of these circulars sent out.

In the returns, duplication of cases was avoided through the nature of the statistics obtained in each individual case, particularly by means of the age and sex.

The total number of epileptics reported, namely, 542, includes nine who are non-residents, thus leaving a net total of 533 as belonging to our population. In our opinion, however, this should be considered a minimum, as it ought to be increased materially by unreported cases under the care of physicians, who, through neglect or indifference, failed to send returns. Furthermore, with very few exceptions, the cases reported are such as are patent to every one, cases attended by convulsions; and if cases of *petit mal*, psychic equivalents, etc., etc., were recognized and reported, the total would be considerably increased. However, for the purpose of this inquiry, namely, for the enlightenment of the public, both professional and lay, and as a basis for future proceedings, the figures as given here will doubtless suffice.

Taking the net total as above given, one is at once struck by the large number in public institutions, namely, 224, or 42 per cent. Of these, 121, or 22 7-10 per cent. of all, are in asylums for insane; 9, or less than 2 per cent., in the Soldiers' Home; 4, or less than 1 per cent., in homes for incurables; 47, or 9 per cent., at the Home for Feeble-Minded at Lakeville; 9, or less than 2 per cent., in sanatoria; 3 in jails; and 30, or 5 6-10 per cent., in almshouses, making the above total of 224 individuals in this State who are so situated as to be not only incapacitated for self-support, from the point of view of their ailment, but also demanding the services of a considerable number of other persons for their care and treatment. Furthermore, one gathers from the above tables that 215 of these are public charges. How many of these latter have an earning capacity of fifty per cent. or more cannot easily be determined, probably much less than one-half.

The preponderance of males over females in the above statistics, namely, 315 of the former to 227 of the latter, is rather striking, inasmuch as works on neurology state that the sexes are equally affected.

When we come to consider the capacity for self-support of

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those who are the subjects of this inquiry, it becomes a matter of interest not only to the physician but especially to the economist, and hence to the State. There are but 114, or 21 per cent., who are fully capable of self-support, and in addition 51, or nearly 10 per cent., who can earn as much as half of their necessary support. Ninety-seven, or nearly 18 per cent., earn less than one-half of what is required to support them, and 215, or 40 per cent., are totally dependent. The balance, 63 in number, or 10½ per cent., are under fourteen years of age; i.e., children who, by law, are required to attend school, not yet wage-earners; and of these twenty-one are feeble-minded.

The returns tell us that there are 128 adult epileptics insane, or 24 per cent.; and nearly as many, 125, feeble-minded; making a total of 253, or 48 per cent.; adding the 21 feeble-minded children, gives us a total of 273 individuals requiring special care and treatment.

There are 44 sane children among the 542 cases reported. A review of what has been said, shows that there are at present within the State, many subjects of epilepsy who are placed in such surroundings as to enable them to obtain but little of what is best for their comfort and the amelioration of their condition. The time of many is rendered unproductive to themselves and to the community; and many who, owing to their environment, have and will become public charges, might, if properly handled, become more or less active workers toward improving their condition.

In its reports for the years 1897-1898 and 1899-1900, the Connecticut State Board of Charities made recommendations to the Legislature for the establishment and maintenance upon the colony or village plan, of a separate institution for epileptics.

In the opinion of the Board of Charities, "It would be especially fitting if a separate cottage department could be established for the care of all epileptics in the State who may need restraining and corrective influences of a specialized form of treatment. The so-called colony plan, by which separate departments are provided for teachable imbeciles, epileptics, and custodial cases, is believed to be most effective in giving to each class the treatment best fitted for its needs, and in accomplishing the greatest measure of preventive and positive service."

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It is evident to those who have made but meagre inquiry into the subject, that the epileptic child should not be placed in the public schools, and that some means for his tuition must be provided. The colony or village system provides for the care and instruction of both children and adults; and this part of the problem appears to have found its solution.

The establishment of a colony will not minimize the excellent methods in operation in Lakeville in this State, for this school has a special class of cases to deal with, namely, imbeciles; whereas the system under review is comprehensive in its scope, including all classes of epileptics from the sane and self-supporting to the demented and totally dependent.

While your Committee has endeavored to cover the ground as thoroughly as the circular form of inquiry would admit, it is evident that some cases must inevitably have been overlooked. Such oversight results from the following circumstances: The physician, recognizing the condition as "incurable," has little to offer in the way of treatment, in addition to his prescription given as an anti-convulsive, or possibly a tonic or reconstructive coincident with this. The patients renew their prescriptions as occasion requires, without further medical advice, and after a variable time the cases are lost sight of by the physician, and fail to become recorded when the census of these cases is attempted.

It is a matter for regret that cases of the epileptic equivalent or mental epilepsy are not generally recognized; for they should be included in the census of epileptics, inasmuch as they terminate eventually in the regular form of the disease.

Referring to the figures, we observe that out of the total number in the State, less than one-half, or forty-two per cent., are under institutional oversight.

Our Committee is convinced that the total number in this report does not represent the true state of affairs, for the reason that epileptics as a class have not been public charges in the sense that the insane have; and, doubtless, there exists a reluctance on the part of the family and the attending physician, through motives of sentiment or diplomacy, to acknowledge the existence of this terrible malady.

In those States in which the care of this class of cases has been most systematically carried out, it has been found that the ratio of one epileptic to every six or seven hundred of the

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general population is as nearly correct as the present system of inquiry is capable of securing.

Using the above statistical ratios, Connecticut would be credited with from thirteen to fifteen hundred epileptics of all classes. While this appears rather startling, it must be remembered that it is the percentage in other States and the country at large, which latter shows an aggregate of more than one hundred thousand cases; and as Connecticut has its proportionate number of cases in other forms of disease, and contains a heterogeneous population similar to that of other States, the percentage computation as given would appear to be correct. With the number of cases sent in from various parts of the State as a basis from which to make a reasonable deduction, your Committee estimates the total epileptic population of Connecticut at about one thousand cases.

The following table is incorporated for the purposes of reference, also to show the ground covered in its preparation.

In conclusion, it may be stated that while your Committee realizes that there is an apparent lack of interest in this class of cases, and the response to the circulars was not as complete as could reasonably be expected, there is a matter upon which the Committee felicitates itself, and that is to the effect that the attention of the profession and laity has been directed into channels through which a proper appreciation of the status of the epileptic and his environment in this State may be obtained; and expresses the hope that the resulting investigations will find their full fruition in the discovery of the solution of, perhaps, the most perplexing problem in cerebral dynamics.

Hartford, Conn., May 1, 1901.

STATISTICS OF THE EPILEPTICS OF CONNECTICUT.

Total number reported	542
Number reported by general practitioners	309
" " " Asylums for Insane	121
" " " Soldiers' Home	9
" " " Home for Incurables	4
" " " Home at Lakeville	47
" " " Reform School	1
" " " Sanatoria	9
" " " Jails	3

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Number reported by Almshouses,	30	
" " " As non-residents of State,	9	
		542

SEX.

Male adults,	278	
Female adults,	199	
Male children under 14 years,	37	
Female children under 14 years,	28	
		542

DEGREE OF CAPACITY FOR SELF SUPPORT—ADULTS.

Full capacity,	114
More than half,	51
Less than half,	97
Totally dependent,	215

MENTAL CONDITION.

Adults	Sane,	224
	Feeble-minded,	125
	Insane,	128
Children	Sane,	44
	Feeble-minded,	21

MAX MAILHOUSE,
FRANK K. HALLOCK,
EDWIN A. DOWN,
Committee.

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[CIRCULAR.]

MAX MAILHOUSE, M.D., New Haven. FRANK K. HALLOCK, M.D., Cromwell.
EDWIN A. DOWN, M.D., Hartford.

CONNECTICUT COMMITTEE OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY.

Dear Sir:

The object of this inquiry is to ascertain the number and condition of all epileptics in Connecticut not under institutional care. We desire a report on all cases known to you, whether under your own care or not; and in order to eliminate duplication, the initials, age, and sex of the person are requested, besides the degree of ability to perform self-sustaining labor.

For the furtherance of this object we earnestly request you to fill out the appended blank to the best of your ability, and return the same at your earliest convenience.

Reports to be of use must be returned before March 1, 1901.

Date.....190

Name of physician or reporter.....

INITIALS	SEX	AGE	RESIDENCE (town)	DEGREE OF CAPACITY FOR SELF-SUPPORT	MENTAL CONDITION (SANE, FEEBLE-MINDED OR INSANE)	REMARKS

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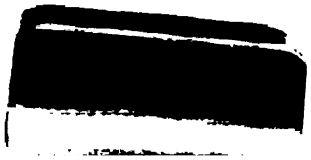

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